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GLEANINGS IN BEE CULTURE

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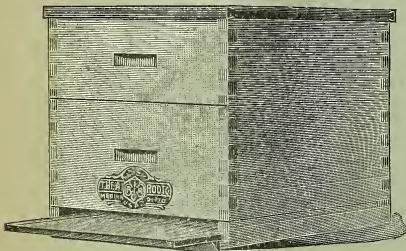
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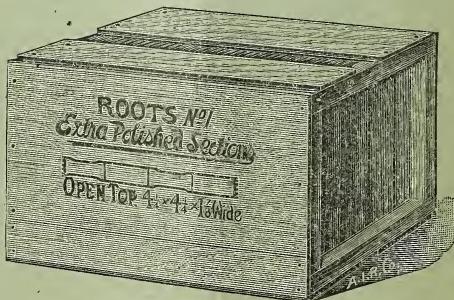


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GLEANINGS IN BEE CULTURE

A JOURNAL
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AND HONEY,
AND HOME
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No. 14



EDITOR YORK and wife have been helping us celebrate the glorious Fourth.

A LOT OF FIGURES are given by G. M. Doolittle, page 638, that I counsel all beginners to become familiar with—they'll come handy, and he has given them in good shape.

IF YOU WANT a bed of beautiful blue flowers resembling heliotrope, on which the bees shall tumble over each other, it is not yet too late to sow phacelia tanacetifolia. Otto Luhdorff, Visalia, Cal., advertised seeds in GLEANINGS.

BEES trying to supersede their queen are supposed to "supply the queen larvæ with more royal honey," page 659. What's "royal honey"? [The phrase in question should have been "edited," before it went to the printers, so as to read "royal food." It was overlooked.—ED.]

THE LIST OF FRUITS given by A. I. Root, p. 664, is enough to make one's mouth water; but one thing you omitted, friend Root, and I wish Mrs. Root and you were here to enjoy strawberry shortcake with us. The crop of that delightful culinary compound is fine this year.

IN THE DISCUSSION as to Hoffman frames, some talk as if it were a controversy between self-spacing and loose-hanging frames. By no means. I would not like to give up self-spacing frames, but it would be hard to induce me to use closed-end or partly closed-end frames. [But the Hoffman certainly comes in for a large share of attention, for it is the most generally used of all the self-spacing type of frames.—ED.]

W. L. COGGSHALL, p. 662, has never seen frames without bottom end staples taken

out without maiming bees, unless it took 5 or 6 minutes to a hive. All in locality, Bro. Coggshall; come out here and you'll see it in a fourth of that time, and without any jarring of the bees that the end staples cause, making them cross, and making queens hide. [Our experience is the same as the doctor's.—ED.]

SO GLYCERINE is not a reliable preventive of candying, page 639. Glad of it; would rather be able to say that there's nothing in honey but honey. On page 660 the use of glycerine is advised. You have my gracious permission to retract, Mr. Editor. [All right, doctor, we stand corrected. We do not believe in the principle of putting any thing into honey, even though the thing put in may be much more expensive than honey. We are glad that the glycerine has failed, as it certainly has.—ED.]

OUTDOOR FEEDING allows the stronger colonies to get the lion's share. "All right," says C. E. Woodward, p. 661, "all you have to do then is to draw combs of feed from the strong for the weak." But look here, friend W., I'm not away off by myself in Cuba, like you, and I'd get into trouble if I were to draw combs from the strong colonies in my neighbors' hives. [In other words, you mean that, if you used open-air feeders, you would feed your neighbors' bees as well as your own. Here again the question of locality plays a very important part in the matter; but I do believe that, where one owns all the bees within a mile and a half or two miles, he can, if he is an expert bee-keeper, practice outdoor feeding with great economy of labor; and then if the strong get too much, he can even things up later on.—ED.]

MR. EDITOR, you want Mr. Aitkin to dispense with quilts and cloths so the bees will seal down the covers, p. 648. But don't those quilts and cloths help protect from the hot sun? A cover with a dead-air space would be the thing. [Instead of using quilts and cloths I would use what is far better—shade-boards, or, better still, double covers, then it would not be necessary to

use a 20-lb. stone to hold either the shade-board or the cover in place. I see quilts and cloths used by bee-keepers many times, and often wonder why others will persist in their use, involving the necessity of handling heavy stones. If the climate is cool, why not have a double cover, or some sort of cover that is warmer than the ordinary single-board thickness? The former with air-space between the two thicknesses, the whole protected by Neponset roofing, makes a very warm cover. This will stay in place, without a stone — yes, indeed, it must be pried loose with a screwdriver or a hive-tool.—Ed.]

THE EDITOR, p. 635, seems a little worried at the continuance of cool weather. Don't worry; it's been a cool June, to be sure; but weather records at Chicago show that June, last year, was 3 degrees cooler, and last year was the best honey season I ever knew. [I hope you are right; but continued cool or cold weather, and continuous rains — almost continuously wet weather when it does warm up — is not very reassuring. It is not too late for us to get a fair honey crop in this locality, for basswood looks well, and is already beginning to yield; but the bees, poor things! can not work on the blossoms more than two hours at a time, when down comes a dashing rain —rain, rain, rain; dark skies, rumble and thunder, then more rain. We are hoping and hoping. Clover is already in bloom because of these same rains. When it does stop, we think we shall get both clover and basswood honey.—Ed.]

"NO DRONES among the sections, and timely taking off, are the chief factors in securing whiteness of comb honey," says S. T. Pettit, p. 645. In this locality, friend Pettit, distance from black combs is a greater factor. Years ago I was in the habit of putting a brood comb between wide frames of sections, to bait the bees into the sections, and I had to be prompt in removing the brood before sealing began, otherwise black cappings would be used on the sections when only a few cells were sealed. You see timely taking off wouldn't work there, and I don't think drones had any thing to do with it. Even if you had exceptional cases in which bees did not carry black wax to the sections, although the distance was short, that doesn't disprove the fact that they do it in other cases, and I don't feel safe without a considerable distance between old combs and sections. As the case you cite was your first effort at comb honey, I'm wondering whether your combs at that time may not have been too new to be very black.

A KINK that I don't remember to have seen in print may be worth mentioning: When a queen is a week or so old, it is often impossible to find her. But a pretty safe guess as to her presence or absence may be made from the appearance of the combs. If there is a central spot with the cells all cleaned out and polished, ready

for a queen to lay in, you may be pretty sure a queen is present. If no queen is in the hive, honey will be scattered in the cells here and there in this central spot. [This is a good point. I am in the habit of diagnosing our colonies to determine queenlessness largely by the behavior of the bees on opening a hive. If there is a loud roar as of distress I surmise the colony may be queenless, but am not sure of it. The absence of eggs and young larvae confirms my suspicions. If I find a queen-cell, then I am sure that the colony is queenless. But here is a colony that has a virgin, or possibly has one. There is no loud roar, and she may be out on her flight. Right here your kink will come in good play. I shall ask our boys to test it and report. By the way, I should like to get suggestions from our readers on surface indications as to the queenlessness of colonies beyond those already indicated. Any thing that will save some of the back-breaking labor of looking over the hives should be welcomed.—Ed.]

CONSUMPTION of honey in a year by a colony of bees has scarcely been thought of till lately, and it is to be hoped that some of these days we may know more about it. Conditions have much to do with it, as I learn from a letter from Adrian Getaz. As he says, in Europe, mobilists (users of movable frames) work for extracted honey exclusively, and in Herr Kramer's figures no honey was necessarily used for the building of comb; and when Mr. Getaz estimated 200 pounds, he counted on bees building comb for sections. Again, G. M. Doolittle, page 651, counts 30 pounds sufficient for the 9 months from August to April inclusive, while Mr. Getaz counts 40 pounds for winter alone, as he says it takes that much in the open and varying winter of Tennessee, outdoors.

I've just been weighing the wax in 8 sections, and find it 4 ounces — this with no cappings, which would materially increase the weight. But if we just take it without the cappings, it would make 1½ pounds of wax for the comb in two 24 pound supers. At 10 pounds of honey for each pound of wax, that would require 15 pounds of honey consumed for the comb. But should there not be a still greater difference? If 50 per cent more extracted than comb can be secured, then while the bees are storing that 48 pounds of comb honey they would store 24 more of extracted. If the same amount is gathered in each case, do not the bees consume that extra 24 pounds? If I am not mistaken, the first estimate I ever saw was that of G. M. Doolittle, 60 pounds, and that stood for a long time. Now we have our choice of 70, 100, and 200, and it would be well if we could have some very reliable data. I venture to say it would not be at the lowest figure. [The actual annual consumption of stores, if it could be accurately measured, which I think it can not be, would vary, I think, as much as the estimates given by our correspondents. So much depends on the locality, size and

kind of hive, the strain of bees, the queen, and the man, one could hardly put down a set of figures as being the right ones for all parties concerned. In the South, as suggested, the winter's consumption would be much larger than in the North; and even in the North the outdoor consumption would be considerably more than the indoor for winter. Then, again, some bees run more to brood-rearing than others, resulting in a large use of stores. In the first place, we do not know how many pounds of honey it takes to make a pound of wax. The experiments already conducted are so much affected by locality and other conditions that the figures run all the way from 3 to 20 lbs. I do not see how we can do much better than to guess at the amount of stores consumed by a colony in a year. For Doolittle's locality I should suppose his figures were reasonably correct. Those given by Adrian Getaz are probably not far wrong; but if any thing they are high rather than low.—ED.]

for delivery, and every bee-keeper ought to have a copy. It consists of 160 pages, 130 of which are taken up with a verbatim report of the proceedings of the Chicago-Northwestern Bee-keepers' Association, which took place last December. The remainder of the book is a report of the Illinois State Association proper. The book is well illustrated with views of displays of honey, and pictures of the prominent bee-men of Illinois. I believe Mr. G. W. York has done more than any other bee-keeper in the United States to give to all other bee-keepers full reports of all that is said at the big conventions—that is, all bearing on the subject. He has become responsible for the stenographic work, itself involving great expense. To enable him to do so the better, it has always been the policy of GLEANINGS to give him an undisputed field, feeling that, if others desired a complete report of conventions, a dime or so would bring it, without crowding columns that are already full. I hope Mr. York's work in this line will be remembered by all bee-keepers.



AMERICAN BEE JOURNAL.

Mrs. Lucinda Harrison, probably the best-known woman bee-keeper in the world, died at St. Andrew, Fla., May 26, at the age of 73, or she would have been that old next November. Her death is not so much a matter of surprise as the fact that it escaped my notice till now. She has been a frequent contributor to GLEANINGS for 25 years. Her life has been such as to bless the world, and she will be missed much, not only by her immediate friends but by bee-keepers at large. Of late years her writings have not borne so much on bee-keeping as on subjects of a general nature. Her home was in Peoria, Ill.



Just four days after the death of Mrs. Harrison she was followed by Mr. C. Theilmann, of Theilmanton, Minnesota. Mr. T. was in times past one of the most valued contributors to GLEANINGS. I learn of his death in the *American Bee-keeper*. The old familiar names are becoming scarcer.



IRISH BEE JOURNAL.

In speaking of insurance the editor says, "Up to June 20, 52 subscribers had insured 596 stocks under our scheme—an increase of 171 stocks upon the corresponding period of 1903. Cost, one penny per stock per annum."



A certain bee-keeper in Australia says he does not paint his hives, for he is liable to be compelled to burn them at any time on account of foul brood. Mr. Digges says, "That is what we are coming to in Ireland." That seems like a strange confession. Mr. McEvoy would clean it out in less than a year, as effectually as St. Patrick did the snakes in that same island.



De Jonbry, a French *savant*, maintains that the chief design in the creation of bees was the fertilization of plants, and that the gathering of honey is merely incidental. Not knowing when to stop storing, their instinct impels them to get all they can, which is usually more than they want, and that surplus is what man takes as his share. That writer claims that the amount of food given to man by bees in the way of honey is insignificant when compared with the amount he gets by better fertilization of the blossoms. The bee seems to be a sort of double-edged benefit to man.

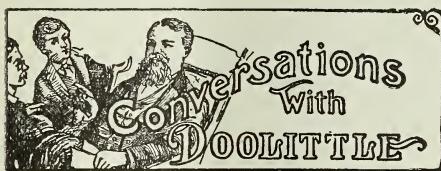


I believe it was some Cleveland journal that said the germs of disease in water can be killed by subjecting the water to great pressure, such as is used in squeezing pomace when making cider. If that is true, perhaps the germs of foul brood in honey can be killed in the same way, without subjecting the honey to the effects of heat. Reports are called for. The principle is this: If a corked empty bottle be put in water, and the latter so confined that great pressure may be applied to it, the cork will be driven into the bottle, or the bottle may be broken into fragments. In a like manner, if much pressure is applied to a spore it is as certainly killed as an apple seed would be by crushing it.



The Third Annual Report of the Illinois State Bee-keepers' Association is now ready

Under the head of "American Courtesy" the editor of the *I. B. J.* says, "C. P. Dadant has issued an invitation for a delegation of British bee-keepers to a convention at St. Louis. He has not thought it necessary to invite Irish bee-keepers. Mr. Dadant is vice-president of the National Bee-keepers' Association of the United States. He ought to know better." Of course, the editor must not be taken too seriously in the above. I am sure Mr. Dadant meant to include in the word "British" all who live under the British flag, whether in Ireland, New Zealand, or Nova Scotia. Whatever happens, it is certain that Mr. Dadant never slighted any one. He doubtless meant to invite the British bee men, so to speak.



TOO MUCH POLLEN.

"Great year for pollen, this."

"Well, Brown, I have known years when bees stored fully as much as this year. Does this storing of pollen bother you?"

"Yes; or I think that what they have in the combs will be a damage to me."

"Possibly. But let us talk the matter over a little and see about it. What did the bees store it from?"

"First, they stored from the hard maple till I thought the combs would hold no more. But we had a week of stormy weather soon after, and they used the most of this for brood rearing, so I got rid of that. Then came sorrel, of which we have acres; then the wild grape, together with that from clover, till the combs are so full that there is little room for brood or honey. Is not such a state detrimental to the welfare of the colony? and should it not be removed?"

"In some localities bees store so much pollen that it seems to those not so thoroughly familiar with the inside workings of the hive as they ought to be that some device for removing this pollen would be of great benefit to them; in fact, I heard a man once offer as high as \$25 for some plan to remove pollen effectually from the combs without materially injuring the same. This was at a bee convention. Then I have also heard it advised to melt up the combs which had so much pollen in them so as to get the wax, which wax was to be worked over into comb foundation to put into the hive for the bees to draw out into comb again."

"Did you not think that good advice?"

"Well, hardly; for with me this pollen will take up all the wax there is in a comb

when put into the solar wax-extractor, while with steam it is nearly as bad. The only way any wax to any amount can be gotten from combs containing much pollen is to boil these combs in water. This will wet up the pollen with the water, and allow the wax to escape without the pollen absorbing it, as it otherwise would, on the same principle that a sponge takes up water."

"That is something I had not thought of when considering melting up combs containing pollen. The hot water process is too long and tedious for me to undertake. What did you think about the machine remedy?"

"About the same as the melting plan. All such advice seems to me to be a damage rather than a help."

"You surprise me. What makes you think that way?"

"In this locality we get large quantities of pollen, probably as much as is gathered in any portion of the United States, yet I have never melted up a comb on this account, nor would I give a cent for the best machine that could be invented for its removal."

"But did you never see where the bees remove it and push it out at the entrance? And does not this show that they had too much of it?"

"Some claim that, where too much pollen is stored in combs, the bees remove it and tumble it out at the entrance, as you speak of; but I am inclined to think that they and you mistake that which is sometimes dislodged from the pollen-baskets of the bees at certain hives having too small an entrance from some reason, or an entrance-guard on, for that which is removed from the combs, as in all of my experience and careful observation I have never seen any to be thrown out in this way unless said pollen had become moldy."

"I guess you do not have as much pollen as you think you do."

"We have two different periods when the bees store very much more pollen than is worked by the nurse bees into chyme for the young brood. One is during the bloom from hard maple, and the other during white-clover bloom, so you see our surplus of pollen is similar to yours."

"Yes, I see. But how full do the bees fill the combs?"

"I have had many combs of pollen that weighed from 4 to $4\frac{1}{2}$ pounds."

"That beats me. I had one comb that weighed $3\frac{3}{4}$ lbs., and I said, 'If it could only have been honey!' What do you do when you find combs so heavy with pollen as $4\frac{1}{2}$ pounds?"

With such combs and times as these I often work as follows: Whenever the bees gather so much as to crowd the queen I next to the brood, and find that this answers a better purpose, at less expense and work, to stimulate brood-rearing early in the spring than the feeding of rye, oat, or any meal, as is so often recommended by

draw the frames filled with pollen back away from the brood, and place such frames as may contain honey which are in the hive between these frames and the brood, thus causing great activity with the bees in changing things back as they wish them again. The result of this is the converting of both pollen and honey into brood much faster than would have resulted had things been left as they were."

"I see how that would work in the maple bloom, and where colonies did not have much brood in the hive; but how about the matter when the hives are more nearly filled?"

"If the brood has increased enough so that this and the combs of pollen fill the hives, then the combs of pollen are taken away for the time being, and combs of honey (if I have them) put in their stead. If I do not have combs of honey, then empty combs are used. If there come a few rainy or windy days at this time I find that what seemed to be a damaging amount of pollen is all exhausted, so that the cells are once more empty or filled with eggs, as you spoke of finding once in your colonies, as it takes large quantities of food for the brood at this season of the year."

"What do you do with the combs of pollen you took out when the bees had so much?"

"After apple-bloom there is little for the bees to work on, and the surplus pollen is soon worked up into brood, and more needed, when I set back that which I removed, and thus brood-rearing is kept up more effectually than by feeding syrup or honey, as is advised by many. I always consider plenty of pollen in the combs during the period of scarcity before clover as a great advantage."

"But what about the later pollen, in time of clover-bloom?"

"The pollen gathered during the time of the clover-bloom is treated differently by the bees from that gathered earlier. The latter rarely has honey placed on top of it, while that from clover is placed in the cells till they are from half to three-fourths full, when the cell is filled with honey, and sealed over so as to preserve it against a time of need during the latter part of winter and early spring. Whenever I find colonies suffering from too much clover pollen I take away two or three of these combs and place them over weak colonies to care for till all danger from moths is past, when they are stored away for winter."

"How can you tell these combs of pollen from those not having any, after the pollen is covered with honey and the cells sealed over?"

"Combs containing pollen under honey are readily distinguished from those without by holding them up before a strong light and looking through them."

"What do you finally do with these combs?"

"When spring opens I place one of these combs in each hive (if I have that many),

many bee keepers. In this way all pollen is used up to a far better advantage than the inventing of machines for its removal from the combs."

"Well, I do not know but you are right."



As a general rule, western comb honey should all be marketed by the first of October.

E. J. Atchley, the editor of the *Southland Queen*, is spending the summer at Littleton, Colo., where he recently arrived with a full carload of Texas bees.

Don't hold back the facts in regard to production. Not only is there no gain in such a policy, but positive harm is usually the result. Prices inevitably reach the natural level of supply and demand.

One of the severest trials of the honey-buyer is careless and incompetent grading. Every bee-keeper should seek to grade according to the established rules that govern the market where he desires to dispose of his product, do his work carefully and conscientiously, and study it as a fine art.

I wish to register most emphatically my approval of the editorial on page 537, June 1, relative to the early marketing of comb honey. The facts therein stated tally with our experience in Colorado last year, and in former years, and the advice given is sound as "old wheat." Read it again, Mr. Bee-keeper, and then paste it in your hat and read it daily until your crop is sold.

If I succeed in collecting sufficient reliable data, I shall be able to give a fairly accurate summing-up of the western crop situation in this department for August 15. I hope that every western bee-keeper who scans these lines will sit right down and write me a postal-card report for his locality. If the size of the crop can be known with approximate correctness, and that information generally diffused, no bee-keeper need sacrifice on his crop by holding the price either too high or too low.

The United States government has at last decided to construct the Gunnison tunnel, which will provide water to irrigate about 90,000 acres of now desert land in the vicinity of Montrose, Colo. Two years will elapse before tunnel and canals will be completed and the land reclaimed. This is

especially interesting to bee-keepers, as it means pasture for thousands of colonies of bees. Other irrigation projects of vast proportions are under way in various parts of the West, which I will bring before the readers of this department from time to time.

Fastening foundation in brood-frames with melted wax is so far superior to the wedge-and-groove method now in vogue that I am surprised to see it no more generally recommended. In Colorado the wedges shrink to such an extent, even when nailed in, that the weight of a swarm will invariably pull down some of the starters. When they are cemented to the frame with melted wax they stay, and the operation is performed much faster than by putting in the wedges. A little tool, the Van Deusen wax-tube fastener, was constructed for this purpose, and works perfectly.

Shallow divisible brood-chamber hives are gradually winning their way into popular favor. I formerly entertained a strong prejudice against them; but a trial has convinced me of their great merit; and if the system of management I am using in connection with them proves a success this season, I shall be ready to shout "Eureka!" Last year I hived about 25 swarms in such hives. They gave a fine crop of section honey, wintered well, and have built up nicely for this season's flow. At present writing they are storing in the supers, and have shown no inclination to swarm. I have not yet realized my friend Gill's objections to "so many sticks and spaces." The hive I am using is two ideal supers holding ten hanging frames each.

COLORADO CROP PROSPECTS NOT FLATTERING.

At this date, July 5, I am sorry to have to write a report under the above caption; but in justice to the bee-keeping public at large, the truth must be told. The cold wet weather of early June not only delayed the blossoms but gave brood-rearing a serious setback. As a consequence, many colonies are not in condition to store in the supers. With the exception of four or five days during the week of June 26, the weather has continued cold, cloudy, and highly unfavorable to nectar secretion, giving a light slow flow. The first crop of alfalfa is now all cut. Sweet clover is abundant, is blooming freely, and would yield satisfactorily if weather conditions were only right. With our long season of honey-flow, there is still a chance for a pretty fair crop; so we are hoping that every day will bring the hot sunshine, so necessary to a good honey-flow.

I have received a few reports from various parts of the State, and, without exception, all complain of bad weather and no nectar in the flowers. Fears are freely expressed that the crop will be a total failure.

SERIOUS LOSSES OF BEES IN UTAH — WHO CAN SUGGEST A REMEDY?

I have received the following communication from a friend in Utah, which speaks for itself. Is this a new and strange bee-disease, or is it a very malignant type of paralysis? Possibly some purely local cause is responsible for the great mortality among the bees of that locality. Who can give us some light?

There seems to be great danger in Utah of a total loss of the entire bee industry. I shall give you, as nearly as I can, the conditions, both in the past and at the present time.

In this valley and in the one 50 miles north of here, called Cache Valley, there have been for many years a great many bees, both in the hands of skilled operators and in the hands of many farmers and small owners. A year ago this spring there were upward of 2000 colonies of bees lost. It was thought a year ago it was owing to the very cold winter weather and changeable weather in the spring; but the strange part of it is that, in some localities not any warmer, but, if any thing, colder, the bees survived all right with scarcely any loss at all.

I lost last year 300 colonies of bees, and in some localities in Cache Valley the e were upward of 500 colonies that went under; and in this valley (Salt Lake) last year there were fully 800 colonies that perished. It was thought by all those who were interested that it was due to the hard winter and cold spring, and was let go at that; but in Cache Valley a gentleman by the name of Bullock, who has been in the business at least 15 years, and had 500 colonies of bees, came through with his last year with not more than 10 per cent loss. He took excellent care of them last winter earlier than usual; but he now has but 10 per cent of his bees alive. Since I heard this I made a visit to where I had my bee-grounds, and will say in explanation, after loss of my entire number last year, that I went into Melal Valley, where there had been no loss at any time, and is none at the present time, and purchased 225 colonies of very strong bees, and had them moved into Cache Valley, where I had the loss last year, and expected that I would accomplish a great deal with them; but when I heard of Mr. Bullock's loss in that locality I at once made an investigation. I was there yesterday, and a large part of the entire 225 colonies are affected with what appears to be paralysis. While there is no trembling, they drop down in the grass in front of the hives, and are unable to fly; and they seem to mount the grass and twigs with great difficulty, and in taking them up in my hands they were unable to fly away, and, if thrown into the air, would drop to the ground. They seemed to have no desire even to sting. It appears to be contagious, for it seems to affect a certain part of a row, while another section of the row seems to be strong and swarming. A number of hives have all gone under. The entire yard, of course, is exposed, for the reason that a few, perhaps 20 colonies from what were left of the lot last year, were put with them without any thought of any thing being wrong, except that they were weak.

I am fully satisfied now the loss last year, which would number at least 2000 colonies in Cache Valley, was due entirely to this condition. I am now anxious for some remedy to overcome this difficulty, and shall appreciate very much instructions and information which will enable me to overcome it.

I have advised my partner in the business to sprinkle powdered sulphur in the hives at night. He has been using salt and water, but that does not seem to have very much effect.

B. P. CRITCHLOW.

Ogden, Utah, June 24.

REPLACING SUPERANNUATED QUEENS.

The foundation for a crop of honey in 1905 may be laid now by providing each colony with a young queen, or at least weeding out all queens more than one year old. Many writers have asserted that this function may be safely entrusted to the bees; that they will invariably supersede queens when they begin to fail from old age. I have not found it to be true in ac-

tual practice—at least it is not in Colorado. A safe rule to follow, and one that makes for improvement of stock, is to requeen every season; and the ideal time to attend to it is in August, during the flow from the second crop of alfalfa.

The majority of our losses of bees in this country occur from queenlessness—from the failure of superannuated queen to rear a sufficient force of young bees to carry the colony through the winter. Many colonies that winter fairly well fail to build up for the flow, simply because their queens are old and worn out. In my own apiaries these losses constituted my entire winter loss, which amounted to fully ten per cent. I feel sure that I can practically obviate such losses in the future by a general requeening during the August flow.

This is a matter of most vital importance, but one that bee-keepers usually neglect—to their loss. M. A. Gill enunciated an aphorism when he said, "Good queens put money in the bank." Certain it is, they are the foundation of all our success in apiculture.

The method of requeening that I prefer, and the one that is probably best for the average bee-keeper, because of its simplicity, is to remove the old queen, and at the same time insert a ripe cell inclosed in a West cell-protector. It is necessary to rear at least two batches of cells, as a certain percentage of the young queens will get lost when they fly forth to mate, and cells will need to be inserted in these colonies a second time.

The young queens thus secured, if care is taken in rearing the cells, will be of the very best, and will be right at their egg-laying zenith next May and June, when prolificness is a very desirable quality. Another important consideration: Old queens will cease laying at the cessation of the honey-flow, while queens reared late in the summer will keep brood-rearing going until cold weather, putting the colony in the best possible wintering condition.

ers," and we will send in their place a choice laying queen.

THE HONEY CROP FOR 1904.

In response to our request, we have received, up to July 15, hundreds of letters from our subscribers in the central States. In a word, present indications go to show that the crop will be fair; light from clover, but abundant from basswood where that grows. For all localities in the region of the central States there has been too much rain, weather too cool, with the exception of Michigan, especially the northern part of it, where it has been very dry. A large part of the bees died last winter, and it has been so dry in the State that the rest of the bees will not be able to do very much.

The reports are somewhat meager from Illinois, and vary all the way from fair to good.

Many reports have been received from Iowa showing a fair season for most localities, but poor in some.

Pennsylvania, from present indications, will take the lead for a good honey crop this year.

Reports are very meager from New England, but those received indicate a light yield.

Ohio will show up fairly well.

New York will probably, where there are any bees left, give a fair yield from clover, basswood, and buckwheat.

Wisconsin and Minnesota will probably have a light crop.

Reports from the region just south of the Ohio River are unfavorable; for during the very time when the honey-flow should have been in progress it was too cool and rainy.

Most of the reports received up to July 5 and 6 were unfavorable; but the great majority of them that have come in since are very much more encouraging, the weather having turned warmer, and the rains having ceased.

There is a universal agreement that there is an immense amount of white clover this season; but in many localities the yield from that source is light, which is probably due to too much cool weather. But the plant has received a wonderful impetus owing to the rains, and it will probably be in bloom in many localities for a week or ten days yet. I think I never saw so much clover in our vicinity as now.

The few reports we have had from Colorado are not very encouraging; but Mr. H. C. Morehouse is gathering data. See his report elsewhere.

Taking it all in all, it is hard to say whether the crop in the basswood and clover belt will be lighter than last year or not. In some localities it will be very much worse, and in some very much better.

We would request our readers to send in postal-card reports of one or two sentences, and *keep sending them in*, because this report will have to be revised for our next issue, and we wish to portray the conditions as accurately as possible.

DRONE LAYERS WANTED.

E. F. PHILLIPS, Ph. D., of the University of Pennsylvania, who, a year ago, conducted a series of experiments on Parthenogenesis, and who is with us again this summer, desires to secure at once some drone-laying queens.

The researches of Dr. Phillips thus far are of great value, I think, to bee-keepers. He has already made some important discoveries; and in order to complete his investigations he will need some drone-laying queens. Send to us, marked "drone-lay-



A FEARFUL MORTALITY OF BEES IN UTAH.

In the department of "Bee-keeping among the Rockies" a letter is published from Mr. B. P. Critchlow, describing a very serious malady that is destroying hundreds and perhaps thousands of colonies in Utah. We have had reports of like trouble in other localities. From the symptoms given I should hardly say it was bee-paralysis. Still, it may be a peculiar form of it.

Some eight or ten years ago, after a heavy honey-flow I saw that there were hundreds and perhaps thousands of bees crawling around in the grass, unable to fly. They seemed to be in a hurry, and somewhat distressed; they would crawl up spears of grass, and drop down and repeat the operation until exhausted. At the time, I thought it was the superannuated or worn-out bees that had borne the brunt of the toil of the season just then closing, and that they were the six-weeks fellows that had run out the term of their allotted days. But the fact that there were so many of them, and especially so at that particular season, and the further fact that we have never seen any thing like it since, would go to show it was something else.

If any of our correspondents or friends are able to offer any solution that will help our western friends we shall be glad to have them communicate with us at once or with the parties direct.

THE WIDE-SPREAD BELIEF IN MANUFACTURED COMB HONEY.

THE average bee-keeper, perhaps, does not realize that the great majority of people outside of bee-dom believe that comb honey is actually manufactured, filled with glucose, and capped over with machinery. Modern civilization has developed so many wonderful things that the public is ready to believe any thing. So persistently have the stories about manufactured comb honey been circulated, even in journals of good reputation, that the average man or woman who does not know any thing about the business thoroughly believes them. He eats comb honey, but is pretty well satisfied that it is manufactured. Traveling men who have come to our place of business can scarcely believe us when we tell them that comb honey is not manufactured, and that we will pay \$1000 for a single sample of it. These same men (and they know pretty well what is the common impression) tell us that everybody believes that the beautiful combs they see in section boxes are entirely the work of man. I fear that the bee-keeping world does not realize the fearful and awful damage that this heresy is doing to their business.

I wonder if the National Bee-keepers' Association could not take up this matter, and discuss the best way to overcome the effect of these canards. If the matter comes up for discussion, the newspapers of St. Louis, I am sure, will be glad to give the gist of that discussion, which will show, of course,

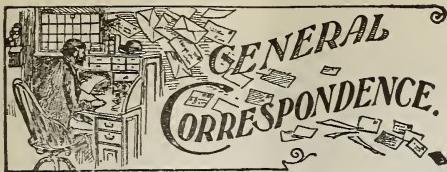
that there is no such thing as manufactured comb honey. It is hard to get the general press to publish items refuting these lies; but they are always glad to get the work of conventions, and in connection with the report of our convention they would certainly publish the truth about comb honey.

AN EXPERT YOUNG BEE-KEEPER; HOFFMAN FRAMES IN THE HANDS OF EXTENSIVE USERS.

WE are having with us here Mr. F. B. Hooper, son of F. A. Hooper, of Hooper Brothers, of Kingston, Jamaica. He is a young man (only twenty years of age), but was anxious to see something of the great wide world besides the island on which he was born and reared; and this wish has now been gratified by a tour through the United States and Canada. He has been sojourning here at Medina for a few weeks, helping our men in our bee-yards. I took him out to one of our outyards to "diagnose the bees" as I call it. It is my habit, early in the season, to take a hasty glance through some of the colonies for the purpose of getting a birdseye view, as it were, of the condition of the bees. After I had opened a few hives I had him help me close them up, and I could not help noting that before me was an expert bee-keeper. There was a certain something in the way in which he picked up the frames, handled the smoker, and opened and closed the hives, that showed unmistakably he had been born and reared among the bees, and knew just how to handle them. I dare say that, for a man of his age, he has extracted and helped to extract more honey than most young men in this or any country, in fact. He has been familiar with averages of over 200 lbs. per colony. He knows what it is to handle immense crops of honey; and I fancy that, if he were to be here long enough, he would be able to show us some new tricks of the trade.

By the way, Hooper Bros. use nothing but Hoffman frames for extracting. Indeed, they consider them far superior to any other style. It is a mistaken notion that such frames are not adapted for hot countries, or wide spacing to get fat combs for extracting. The fact that some of the largest producers in the world use them shows that they are not so difficult to handle as those who have not used them extensively suppose.

Mr. Hooper remarked, after he had been here a few days, that he was suffering the awful pangs of homesickness. He asked me, in a plaintive sort of way, if I knew what that was. I said I had never had that awful feeling, but I had seen those who had. Well, Mr. Hooper has seen enough of the world, and, I should judge, feels that there is no place like home; and, indeed, his home or his country is something to be proud of—a climate that is ideally perfect—one that is, perhaps, the greatest paradise for bees, unless it is some portions of Cuba, in the whole world.



OVERSTOCKING A LOCALITY WITH BEES.

Personal Rights of Bee-keepers; a Very Fair and Candid Statement.

BY W. M. WHITNEY.

Such are questions that come up occasionally for the consideration of bee-keepers. In fact, in some localities the matter seems to assume a somewhat serious phase. A person keeping bees in a given locality, by virtue of the fact of being the pioneer in the business, and, perchance, in an ordinary season, has the region sufficiently stocked, it is contended, has the moral right, and should have the legal right, to warn off all persons attempting to carry on the same business as trespassers from such territory.

Passing over the question of the legal rights of such a person, there can be no two opinions as to what they are. Let us consider the ethical side of the question. As the ultimate result (the money value) is the gist of this whole matter, it does not materially differ, so far as the rights between man and man are concerned, from any other rural pursuit, nor, in fact, from any other line of business.

Suppose that some farmer starts out on some special line of agriculture, as, for instance, raising potatoes. I have in mind such a venture in New York, years ago. The first crop brought in the neighborhood of \$1.00 per bushel, and several times over paid for the land. Farmers all through that region caught the craze for raising potatoes. Those who lacked seed, the next spring bought at high prices. Potatoes sold in the fall at 18 to 20 cents per bushel. What right had these farmers to interfere with this man's special industry by glutting the market with potatoes? But who gave him a monopoly of this special food production to the exclusion of every other farmer? This monopoly business is just what we are all complaining about in almost every line of business. Overproduction is within the recollection of many, of every commodity raised on the farm—grain, fruits, horses, cattle, sheep, hogs, wool, etc.

Farms have been mortgaged to extend the business in hand, and lost by overstocking—by overproduction and competition. Turn on the search-light for the turpitude in any of these cases, and find the guilty person if you can. So it has been the world over in every line of business. Successful ventures in any branch of manufacture tend to stimulate and extend the business until overproduction follows, and, in many cases,

bankruptcy is the logical sequence. Shall we run down and punish all except the pioneer in the various ventures which resulted in general disaster? Any rule of ethics that gives to an individual bee-keeper the exclusive right to a given territory, because he happens to be first on the ground, should give the same right to a person engaged in any other line of business for the same reason. Nothing would suit the monopolist better. The pioneer bee-keeper wants a monopoly of the territory, or, in other words, the business. What's the difference?

To illustrate the fallacy of the position taken by those who claim a prior right, let us take a case in point as an object-lesson. Two years ago Mr. M. Ethics started bee-keeping in a fine farming region having an abundance of white clover, considerable alfalfa, and many other honey-producing plants, and no bees within several miles of him. I know of just such a location now. He secured a little patch of ground for his home, on which he located 100 colonies of bees; he also secured an outyard which he stocked with another 100 colonies. Being the only person in the business, the outlook seemed all that one could desire. A large crop of fine clover and alfalfa honey was secured, and marketed at satisfactory prices as the result of the venture; also, the colonies had increased 50 per cent; hence another outyard was established the following year. The farmers began to open their eyes, and look about themselves, and to inquire one of another whether they had not been stupid to let so much material wealth of the farm go to waste all these years. They began to read papers that told how to keep bees. Mr. Ethics noticed that they were stocking up all through his locality. The following is substantially Mr. Ethics' story as I get it from him through an interview, *a la Doolittle*.

He said that, being the pioneer in the business, and as he had the locality fully stocked, it was ethically wrong for them to come into his territory and ruin his industry. He said that was the way he looked at the situation at that time. But they said to him that they were there first—in fact, were raised on their respective farms. Still, he argued that he was there first in the bee business; that the locality was fully stocked, and that any increase of bees meant absolute ruin to the entire business. He said, "You ought to have seen how those farmers went for me. I didn't know but they'd have my hide nailed up on the barn to dry, the way they came at me." They insisted that they owned the land on which the blossoms grew; that they paid taxes on their property to maintain the government; to support schools; to construct roads, etc., and could not understand why they had not the same right to furnish pastureage for their bees as for their cattle. One man said he had just rented a farm of 200 acres about a mile and a half from Mr. Ethics' home yard, on which there was

about 80 acres of very fine clover pasture; that he was moving his stock and other effects, among which were 50 or more colonies of bees. Of course, he admitted that he was not first on the ground, but could not understand by what law of ethics he had not as good a right to pass'ure his bees on land he paid rent for as another had who paid nothing.

Mr. Ethics told me this and much more. You knew he's a glib and smooth talker. He said it was night when he got home; that he went to his room and shut himself in, and sat down to think, with nothing but the stillness of the night and his inward self to commune with; and, by the way, that's a pretty good practice when one wishes to do any hard thinking, and more especially when self is interested in the outcome. He said, "After thinking the matter over I came to the conclusion that, as compared with these men, my claim vanished into thin air; and if any one moved it was my business to do it; yet none of them objected to my remaining and making the most of my enterprise. I said to myself, 'Every time you opened your mouth you put your foot in it; in fact, you've made a fool of yourself, and you'd better go way back and sit down. These men have the same moral right to keep bees for the production of honey that they have to keep cows for the production of butter and cheese.'"

Then I said to him, "That's the right kind of talk; that's the kind of ethics I like. The bee-papers all tell the farmers to keep bees, and I think every one of them should do so — not in a slipshod way as many do, but in an up-to-date manner as every thing else should be done on the farm. Fruit-growing is a part of farm industry, and bees are inseparably connected with fruit-raising. I think every farmer's family in the land should have lying on their center-table some good bee-journal, as well as one on fruit-growing and on general agriculture."

Every farm with five to ten colonies of bees properly kept, with a good bee paper as a guide, would introduce one of the most interesting pursuits of rural life, and furnish the family one of nature's most delicious delicacies. Ethical rights of an individual to territory, he does not own.

PEDDLING HONEY.

**Refuting the Lies about Manufactured Comb Honey;
An Interesting Experience.**

BY FRANK M'GLADE.

I was especially interested in the two articles which recently appeared in GLEANINGS on the subject of selling honey — the one a failure, the other a success. I know something of the feelings of each, and desire to write my experience for the benefit of others.

When I was a young man I went to Cincinnati to learn how to sell books for the

"Furgerson Brothers." When I reported for duty he said to me, "I'm busy now; go and sell a book to that typewriter there," pointing to a machine on a stand in a corner of the office. I stood there in silent amazement, as the real meaning of his words came to me, that I was to go up to that inanimate thing and talk to it just as though it were capable of comprehending what I said. If I could and would do that it would indicate that I had the material in me to make a successful book agent. Well, I didn't even try it; but I received more real instruction in the few minutes I stood there than in all the rest of the two weeks I was there. I never forgot it.

Last year I got a crop of honey — not a large amount for some, but large enough to make it interesting for me. When I got ready to sell it I went to see the commission men, but they did not seem to be interested. Then I tried the grocers; but they wanted it for almost nothing, so I said, "Mc., if you know any thing about any thing, it's honey. Go out and sell it." And so with the vision of that old typewriter before me I pulled off my coat and went to work, and made it go nicely. I began with the comb honey, and sold direct to the consumer, in the drygoods stores and offices, to whoever would buy. I was regarded with suspicion everywhere, and found an almost universal notion that honey was adulterated, or "fixed up." Some expressed themselves in words, others by looks. This prejudice I saw I must remove, and so (remembering that typewriter) I set my tongue "agoing" at such a rate and in such a way that I was soon sold out. I offered it to them at a price cheaper than they could get it for at the stores, which fact I never failed to call their attention to, yet I was getting more for it than I could get from the commission men. I would hold up a section, and say, "Gentlemen, the first day of May that section was in the factory at Medina. The first day of June there wasn't a thing in it. There isn't a thing in it to-day but what my bees put there; and every thing in it is just as it was gathered by the bees from the flowers. I guarantee it to be genuine white-clover honey, free from any adulteration whatever, gathered by my own bees. You can do as you please about taking it, as I would just as lief have the honey as the money, for I can get the money for the honey."

Whenever I saw it was prudent, I would talk "bees" — their habits; the queen, drones, workers; their age, how fed, length of time to hatch, construction of comb, etc. They would listen interestedly, and seemed to have confidence in what I said. When they would mention "manufactured honey," that would give me a new line that I would run along like this:

"No, gentlemen; I know of no such factory — do you? If it is manufactured, it is not honey. If it is honey, it is not manufactured. Honey is the pure nectar from the flowers, which can be gathered only by

the bees. There is an offer of one thousand dollars at Medina, Ohio, to any man who will produce one pound of artificial comb honey. The offer has been open for years, and never taken, because *it can not be done.*"

When I started in on the extracted honey, that was almost another thing. They were sure that was adulterated.

I had some trouble to find a jar to suit me all right. I first tried Mason quarts, but they were too heavy. Then I tried the pints; but they did not suit. I finally found a clear-glass jar, made by the Federal Glass Co., with a screw cap, costing 30 cts. per dozen, which I could sell for 25 cts., which seems to suit all around. This company sells only in carload lots; but they let me have what I wanted, and I have come to the conclusion that the best way to get what you want is never to want what you can't get.

The first thing I did was to give a jar to the *State Chemist*, which he analysed and made a record of.

For a label I had the words

"Honey, Frank McGlade, Pataskala, O.," printed on white paper. It looks nice and clean. Then I went at it again. They would ask why I had it in that shape. Then I would explain the cost of comb, that certain conditions prevailed in an apiary during a honey-flow that made it profitable to extract it. One asked, "How did you get the comb out of this honey?" I replied, "We don't take the comb out of the honey, but take the honey out of the comb by centrifugal force, and return the combs to the hives to be refilled by the bees."

I worked at it all winter in the stores and offices. It was too cold to make a house-to-house canvass, but I could go into one of those large buildings and work for hours, and be comfortable. I met the smartest men in the city, and was always treated courteously. I wrapped each jar in clean paper, and folded the ends neatly, as I had seen druggists do. The average business man dislikes to be seen carrying a package; but most of them will do it if it is in a neat shape. I dressed neatly, which attracted attention, and gave me audience many times. Sometimes I would enter an office, and, softly approaching the nearest man, would say, "Did you say you wanted some pure white-clover honey?"

He would look around, and I would watch his face to see him; thinking if he had told any one he did he would finally get together with "No, I didn't." Then I would go to work.

Another time I would enter an office in which a dozen or more would be working, and begin talking in a low voice, until finally some one would look around and say, "What have you got?" Then I would say out loud, "Honey! the sweetest thing in the world — except my wife." That would cause the girls to smile, and take a second look at me, and — buy some honey.

In an architect's office where half a dozen

men were bending over their work, too busy to look at me, I watched them a few minutes, when I said, "Gentlemen, straighten up: take a long breath and a moment's rest while I show you a structure that, for architectural design and economy of space, the builders have never been excelled." Of course they listened to me and bought some honey.

One thing I heard so much it got to be old, was, "Don't you feed the bees glucose and such things, and then sell it for honey?" which always brought forth a snappy "No, sir!" Some would insist it was done, when I would challenge them for the proof; and if they were too insinuating I would deny it, for the simple reason that those who could do such a thing wouldn't; and those who would, can't. Then I would explain the process of feeding bees, showing them why and what we fed for; that a bee-keeper's professional pride led him to produce pure honey rather than the accumulation of money in a fraudulent way; that they were "honest," "and," as Bro. Gardener, of the Limekiln Club said, "consequently very poor."

Another question I was often asked, "Did you make this honey?" I would answer, "No, sir; the Lord made it, and made the bees to gather it, and gave me sense enough to get it. How many jars did you say you wanted?"

I learned some things as I went along. One was, the lack of knowledge of bees and honey. I met only two persons who had read a work on bee-keeping, and they had read "Maeterlinck."

I am convinced that honey is not a commercial article, such as sugar, beans, and corn, but is a specialty requiring different methods for its sale. It is more of a luxury which would be indulged in more if men were sure it was pure honey. Whenever I could sell a jar to a man my labors were over, as he would usually greet me the next time with "Say, bring me another jar of that honey," and nearly every mail brings requests for it. One postal lies before me, received to day, asking for 6 jars. I sold hundreds of pounds, and collected every cent. Some paid in advance. The Hartman Sanitarium took 40 lbs.; a hotel 50 lbs. Barbers bought more liberally than any other trade.

A traveling salesman overheard me talking in a piano store. He bought 6 jars, which I put up in a box and shipped to him to his home in New York city. Another had 4 jars sent to his home in Pittsburgh, and so I might go on, but this is enough.

I should like to say something about commission men, but hardly know how to say it. All winter I had my eye on the honey displayed by them. It was all comb. If there was any extracted I failed to see it. I have come to this conclusion: I would rather have my honey at home than to have it there. I believe I could take better care of it, sell it quicker, and get more for it. Commission men do not create a demand —

they only supply one already created. If I sent my honey to a commission house I should feel like doing something to create a demand for it. There is a demand for apples, oranges, bananas, cabbage, and the like, from hundreds of dealers, because they are necessary articles of food; but you put a lot of honey down alongside of such things, with only such demand as comes from the grocers, and with the commission man loath to push it from lack of knowledge of its virtues and merits, it is readily outclassed. Honey is a specialty, and in a class by itself; and the almost universal suspicion of adulteration has a tendency to keep it there. This prejudice I tried to break down, and feel that I succeeded with most I talked to, and feel that I did more to enlighten the people on the mysteries of the bee than perhaps ever was done before by one man in the city of Columbus. I don't know of any better or cheaper way to clear away these doubts than for every bee-keeper who has honey to sell to go in and sell it himself, right at home where he is known; stand square on your feet, tell them what you know about bees, and you are bound to succeed.

That blessed old typewriter! I wonder where it is. No doubt it has long since been consigned to the scrap pile, or has become reincarnated in a more modern one, presided over by some pretty blue-eyed girl with a pencil in her hair and a pink sack; but it will never do a more noble deed than

the silent lesson it taught that country boy more than twenty years ago.

Pataskala, Ohio.

[There is no possible doubt but that the stories about manufactured comb honey have done a fearful damage to the honey business. See editorial on this subject elsewhere.—ED.]

BEE-KEEPING IN CENTRAL CALIFORNIA.

Fred M. Hart and His Apiaries.

BY TRANSIENT.

Early in March of this year the writer had the pleasure of meeting many prominent apiarists of Central California at their Central California Bee keepers' Association in Hanford. As was natural, he inquired into things apicultural. At this time but an inch or two of rain had fallen, and all agreed that it would be a very poor year for bees in this part of California. Since then we are told the honey crop is a failure. Many were feeding then to keep bees alive, when, usually, honey would be coming in. The present foul-brood inspector, Fred M. Hart, of Hanford, took us in charge, and, in his light rig, soon had us viewing the apiaries in the locality nearest Hanford. At his fine country residence shown, we were made welcome by his wife. She is interested in all he does, and spoke of E. R. Root's visit when on a trip to California. Mr. Hart's little boys are bee-men too, or think they are. The home they entertained you in has since burned to the ground. In the views shown in the large plate (except the top one) can be seen our friend in his out-apiaries. He, too, expects no crop, but goes on with their care in true bee-keeper style, keeping them in good condition for another season. In the top view of the large plate he is seen on one of his tours of inspection for foul brood. He is experimenting with formaldehyde being aided by a retired army doctor who has had experience with its use as a disinfectant.

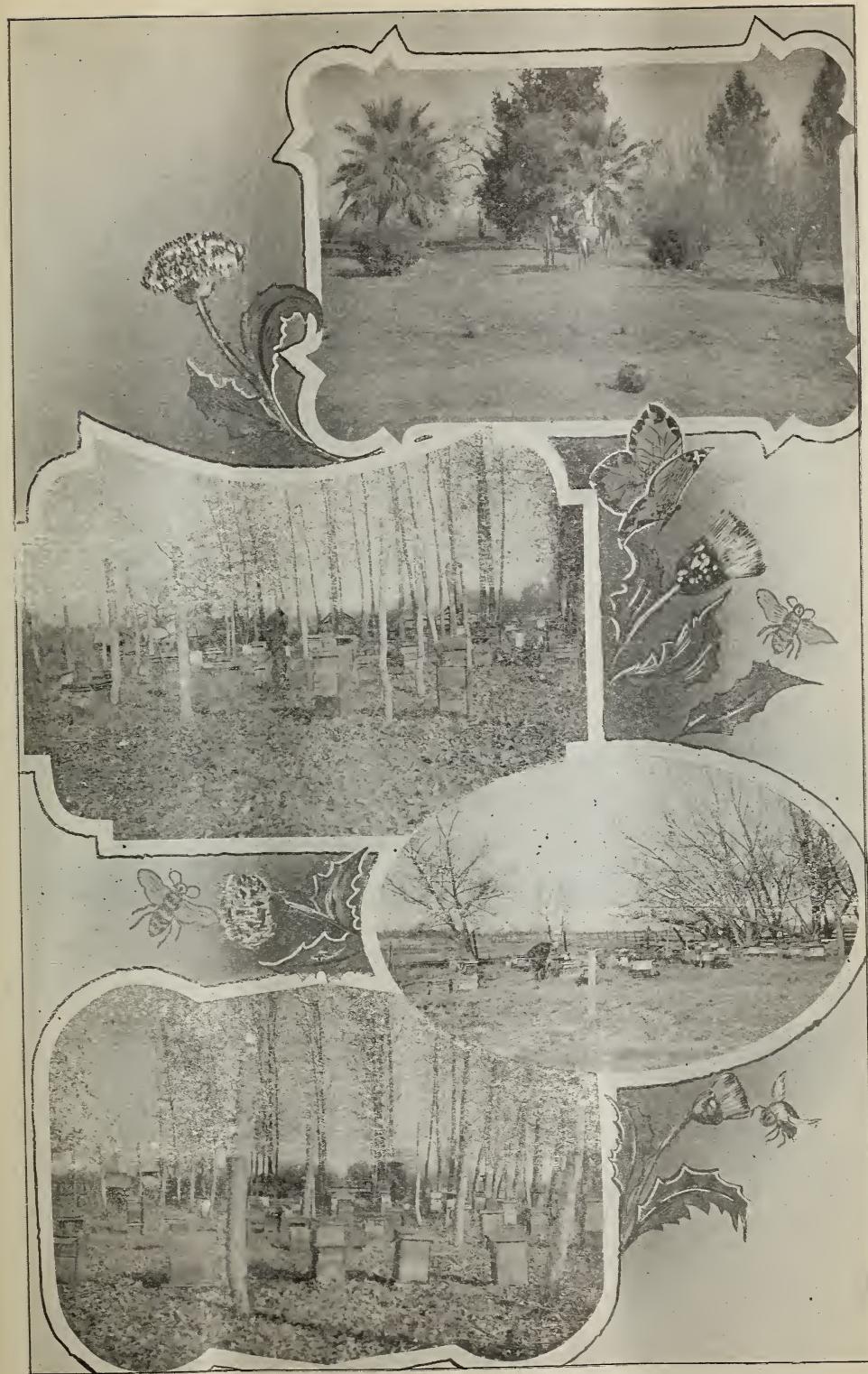
As his locality is overstocked he has his bees in five different yards; but with the aid of one man he gets around to them all.

Mr. and Mrs. Hart are seen in front of their home in the view, and their hearty welcome given a stranger bee-keeper will ever be remembered by me.

[I remember with very much pleasure the delightful visit I had with the Harts at their beautiful home near Hanford. These people are among the few



FOUL-BROOD INSPECTOR FRED M. HART AT HIS HOME
IN THE SUBURBS OF HANFORD, CAL.



FOUL-BROOD INSPECTOR FRED M. HART ON A TOUR OF INSPECTION; HIS OUT YARDS.

bee keepers in the United States who obtain their sole means of livelihood from bees. They are all bee-keepers, and intensely interested in every thing that pertains to their favorite pursuit.

At the time of my visit, trouble was brewing over the pear blight situation. The pear growers had threatened to poison the bees if the bee-keepers did not remove them from the vicinity of the orchards, and matters were becoming somewhat strained.

I remember particularly with what apprehension Mrs. Hart looked upon the situation. Here they had built up a beautiful home, had a fine bee-range, and every thing was going on lovely; and now to feel that they did not have a right to conduct their business on a live-and-let-live principle was not pleasant. Well, as our readers know, a compromise was effected at that time, and since then I believe the pear-growers are not as ready to accuse the bees of the spread of the blight. Mr. Hart and others for one season, as an ex-

CUBA AS A BEE COUNTRY.

A Few Mistakes Corrected.

BY C. E. WOODWARD.

I beg permission to correct a few mistakes I have noticed of late that have crept into GLEANINGS. It is not to be supposed that any editor of a bee journal is a revised and enlarged walking encyclopædia with a patent index, therefore it is nothing strange that misconceptions should find their way into the columns of good old GLEANINGS. But be that as it may, I wish to say that Cuba as a honey country, taking one year with another, in my judgment can not be excelled in regard to producing a good crop of honey here. It requires just as much good judgment and experience as anywhere in the world. One may produce a crop of honey a little easier here than in some other countries, but it needs intelligence just the same.



AN OUT-APIARY OF FRED M. HART.

periment, moved all the bees from the immediate vicinity of the orchards during the time they were in bloom. This, so far from accomplishing any good result, did not affect the blight either way. It continued to spread just the same. Insects and wild bees that were beyond control of man, it was demonstrated, would scatter the virus from tree to tree; and the presence of the bees under domestication did not materially affect the situation.

Mr. Hart, from what I know of him, would make a good foul-brood inspector. He is tactful, and enjoys the respect, not only of the bee-keepers, but even of the rabid fruit-growers, for he, together with myself and some other bee-keepers, visited a number of them. All of them greeted our friend most cordially.

With regard to the treatment with formaldehyde, I should like to have Mr. Hart some time at his leisure tell us how successful he has been with it.—ED.]

The writer has at this moment several apiaries in mind where cheap native Cubans are at the head of them; and what is the result? I will tell you. It is no honey, lots of foul brood, and destruction. Once these were fine up-to-date American apiaries—thousands of dollars thrown away for the sake of saving a few dollars at the time in employing cheap Cubans. On the other hand, the native will never make a good apiarist. As a rule they are illiterate. The most of them can not read, and of course that holds one back. Another thing, they try to see how little work they can do in the longest time. But, of course, all this will change in time. The expert produces large crops, keeps out foul brood, keeps his bees strong, puts his honey on the market in better and more attractive form, and gets better prices for his labor performed.

As a rule the natives know nothing about the production of comb honey, and they are sure to put off for to-morrow what they

should do to-day, and that will not do in the bee-keeping business. I presume some of the men who discuss and encourage native labor believe in low-priced men and high priced wax. I say, if a man is proud of his apiary he will have every thing in the best of order — every comb built on full sheets of foundation, and every frame well wired — American hives, American labor, American frames, and Cuba will do all the rest. I here ask Mr. A. I. Root to point out every fault that he saw in my apiary while at my house. It will not hurt my feelings a bit to have every fault he saw go into print; and I hope, after he sums them all up in order, that he will come and make me a much longer visit than he did the first time. Of course, I am thankful for the one he did make me; but if he will come I feel sure I can prove every word to him that I write here. Moreover, there is plenty of room here in Cuba for good American apiarists. There is always plenty of room at the top. A good man can come here and make good money in the bee business; but, of course, he must know what he wants and then go ahead. I have taken as much as 300 lbs. of very nice comb honey from only one colony in an average year; but, understand, I do not say that all colonies will produce that much; but I do say that Cuba is a fine country for honey; in fact, it is the natural home of the honey-bee.

I also see statements in bee-journals that foul brood is everywhere in Cuba. That is not true. All disease is caused by man. The same holds good with foul brood. A good apiarist will not allow foul brood to remain in his apiary very long; and as regards insects, they are not to be thought of in comparison with some States in America.

Guanabana, Cuba.

[When I visited friend Woodward's apiaries I was a good deal discouraged at the trouble we had had with robbing in our own apiary at Paso Real, and also at the difficulty we had in queen-rearing. I have since had reason to believe that a great deal of our trouble there was on account of having the apiary too clean, and the hives arranged with too much mathematical accuracy. They were just alike in color and situation; all the grass and weeds were cleaned out until the whole thing was exposed to the full blaze of the sun. This did very well in January and February; but as the sun got warmer it did not answer. Friend Woodward's home apiary is under the shelter of large trees. In fact, the sun hardly gets down to the ground at all. Besides these tall trees there are various bushes, perhaps higher than one's head, trimmed up so as to be out of the way of the apiarist; but the ground around the hives is almost as clean and smooth as at Paso Real. I can not think of a thing to criticise or find fault with in that home apiary. It was really a revelation to me. Friend W. opened his hives without a bit of robbing — no robbers chasing him about

from one hive to another. He was raising queens successfully, even in small nuclei, with as little trouble as we do it here in June. My arrangements were such that I did not have a chance to look over all the out-apiaries, but those I saw were in charge of educated American bee keepers, and every thing was moving along very much as in his own home apiary, but perhaps not quite equal to it. He had not been preparing for me, for I came upon him without notice, unexpectedly. I think he is a little severe on the native Cubans; but it is true they labor under a great disadvantage in not being able to read the literature we have on bee culture. We expect to have our A B C book, somewhat abbreviated, in the Spanish language very soon, and this will be a great help; and I want to add, also, that at least some native Cubans are splendid workers. Of course, they are not familiar with American methods; but I saw Cubans who would crowd a Yankee pretty hard, especially when at work at something he was brought up to. I did not see any foul brood or any trace of it in any of friend Woodward's apiaries.—A. I. R.]

THE GOLDEN STRAINS OF ITALIANS.

Their Peculiarities as Viewed by Different Bee-keepers.

BY E. F. ATWATER.

For some time I have watched the discussions in GLEANINGS and other journals, as to the best race or strain of bees, and in this connection I have noticed that many writers have failed to realize that locality and the "personal equation" may have much to do with the problem. In GLEANINGS, Sept. 1, 1903, page 759, is an article relating experience with the golden Italians, by J. W. Guyton, M. D. Mr. G. accuses them of being "gentle enough, fair workers, slow to enter sections, crowd out queen, smaller than three-banders, therefore can not carry as much as three-banders. Not prolific, some of them bent on superseding."

I have had experience with five strains of the goldens (perhaps all more or less related). Among them some were fully equal in honey-gathering to any bees I have owned; others seemed not hardy. My colonies of golden stock are not slow to enter sections, compared to the leather strains. One Idaho bee keeper, living not very far from Parma, finds a certain strain of goldens so superior that he has introduced such queens into nearly all his colonies.

As to size, why can't we have measurements made, and know if the best goldens are smaller than the three-banders? I, for one, don't believe it. Perhaps F. B. Simpson or A. C. Miller will tell us about the size of various strains and the capacities of the honey-sacs.

On page 55 of GLEANINGS for 1899. Mr. W. Z. Hutchinson, in advertising a certain

strain of bees, quotes a letter from Oldenburg, Ind., dated June 14, 1899, saying, "Golden Italians, which are as lazy as they are prolific." But W. Z. H. adds, "I have had some strains of goldens that were excellent workers."

H. C. Morehouse, in *Rocky Mountain Bee Journal*, Aug. 15, 1902, writes: "The yellow Italians breed up quickly in spring, but dwindle badly during winter, and are almost as vicious as full-blooded Cyprians. They are good workers, but better robbers, and their great prolificness keeps them strong at all times, except in early spring."

H. H. Hyde, in *GLEANINGS*, Jan. 15, 1902, says, "We have found these goldens to be good workers, and a very good bee for climates that have a short season or where there is only one short honey-flow."

C. Russell, *GLEANINGS*, 1900, says, "I would not take the best five-banded golden in the world as a gift."

J. B. Scoggins, in Nov., 1901, *Southland Queen*, says, "For honey I want the five-banded Italians mated to black drones, as they will always roll up the honey."

I have seen and handled exceedingly gentle goldens, ugly goldens, good and bad goldens, and the same of the three-banders. Nearly every fault can be laid to the goldens, and, on the other hand, there is not a virtue possessed by any strain of Italians which some strains of goldens do not possess. In the way of beauty, I have never seen bees which, to my eyes, would compare with a colony of "golden albinos" which I saw in the queen-yard of Mr. Thos. Cranty, of South Dakota. I would be willing to join J. M. Gibbs' "Three banded Italian Bee Club," and just as willing to join a "Golden Italian Club."

As to the foreign races of bees, some of them, in some traits and for special purposes, greatly excel the average Italians. I have quite a number of Carniolan queens mated to Italian drones, which makes, almost always, a gentle bee, not much inclined to swarm, caps honey whiter than average Italians, shakes off extracting-combs somewhat easier, more prolific, builds up somewhat better, and breeds during harvest a little more than Italians; so you see that I am not wholly satisfied with any strain of Italians yet tested.

It may not be generally known, but it is a fact, I think, that some of the world's most extensive bee-keepers prefer the Carniolans. Previous to the death of Capt. Hetherington, Carniolans were largely introduced into his extensive apiaries, as he had found them "far superior in honey-gathering."

W. L. Coggshall also uses some Carniolans, though W. W. Somerford once wrote in *GLEANINGS* that to the introduction of a non-swarming strain in his apiaries was due the greater part of Mr. Coggshall's success. If the Carniolans are a non-swarming strain, the fact has not previously been mentioned.

In April, 1901, I called on L. M. Brown,

of Sioux City, Iowa, and found him using a great many goldens from a noted Florida breeder. Mr. Brown produced extracted honey at that time, and found this strain of goldens to be unsurpassed.

Doolittle, in explaining his position in regard to the relative merits of the leather and golden stock, was unable to see any but "minor differences" between them, while H. E. Hill once wrote that, in a poor honey-flow, the goldens "were scant and scattering layers," and that their brood would often produce "cute little golden drones" instead of workers. I have heard that, in rearing golden queens, an abnormally large proportion of them turn up missing in the nuclei. Finally, I have not found a strain of goldens sufficiently superior to pay me for the trouble of rearing many golden queens and re-queening my apiaries.

Boise, Idaho.



HIVING SWARMS FROM INACCESIBLE PLACES.

Dr. C. C. Miller:—Please answer the following questions:

1. How long should one leave a swarm on a limb before touching it?
2. When the bees settle on a lot of small limbs and on the ground, how do you handle them?
3. If they get on an old gray-willow stump that you can't move, how would you handle them?

4. After studying for a long time I got a colony last spring, but did not let it swarm last season, but divided it until I had five colonies which wintered well, only about a handful dying. When warm weather came, two colonies quit their hives and went in with the others—at least I suppose they did, as they disappeared, and the others seemed to have many more bees.

5. The other day I heard bells ringing and pans beating, and thought the house was on fire. I rushed up from the garden to find a swarm settling in a clump of wild roses, and on the ground at the roots, and on every dry stick lying around. How would you have hived that swarm? I used the little bee sense and what horse sense I had, and cut off what I could, swept the rest into a pan, and put them into the hive. I left the hive there. At night I picked it up and placed it with the others; but most of the bees left it the next day. There is a lot in it yet, but nothing like the lot I gathered up. Where do you suppose they went?

6. Yesterday another lot went out about

20 feet from the hive, and settled on an old burnt stump. Now, you may laugh as much as I did. I commenced to gather them in handfuls, and put them on the hive, and most of them would fly right back. Oh, no! swarming bees don't sting. They sailed into me wherever my pants were tight—on my shoulders, face, wrists—and I fled to the house for coat, veil, and smoker. Stings don't bother me two minutes. Back I went, rigged the hive against the stump, and packed them in by handfuls. The seat of my pants was tight, and I felt as if I were sitting on a cactus-bed. All at once they started on a dog trot into the hive, and I left them there till night, and to-day they are fine, and I don't know where they stung me. They have all stayed put.

7. I would cut the queen's wings, but I am waiting for some old bee-man to come along and show me how to find her. My old eyes are not very good without a veil, and it bothers me to find the queens.

8. What do you think of "buffalo chips" for a smoker? I find them as good for bees as for mosquitoes. JAMES FULLERTON.

Red Lodge, Mont., June 18.

[Dr. Miller replies:]

1. No longer than to give it time to settle in a somewhat compact cluster. Otherwise there is danger that scouts may entice it to some selected place. Many times, however, a swarm will hang for hours.

2. Take a hive containing, if possible, some drawn-out combs, and, if convenient, a frame of brood of all stages, with cover only partly on, and without bottom-board; set or hold it close over the bees, and let them run up into the hive. Or, set the hive, with bottom board on the ground close to the cluster, letting the bees run in at the entrance, encouraging this by lifting a few of the bees and placing them directly at the entrance. Cut off the small limbs, and place them (bees and all) at the entrance.

3. Set the hive with its entrance touching the cluster, if necessary putting under the hive something to make it high enough; then keep dipping a few of the bees from the cluster with a dipper or a big spoon, or even a bit of board, and place them at the entrance until the bees set up a line of march for the hive, and then the bees will do the rest.

4. Bees, especially weak colonies, have the bad habit of sometimes deserting their hives in spring and entering others, and I don't know either the cause or the cure.

5. Very likely I should have hived them much as you did, as indicated in answer 2. The bees that deserted may have gone back to the mother colony; or they may have swarmed out and gone off with the queen, the field bees that were out at the time returning and remaining.

6. However sweet-tempered swarming bees may be, one feels better to be protected. With veil pinned tight down, close wristbands, and trousers in stocking-legs, one is

safe against stings except on the hands, and I'd rather take the few stings I get on the hands than to be bothered with gloves.

7. Now look here; don't you wait for any "old bee-man," but go right to work looking for queens, and you'll find it easier than you think. Put on your specs; and with a black veil, and so seated that the veil in front of your eyes is in shadow, you will not have the least trouble in seeing well enough to find a queen.

8. There are other things you might like better than "buffalo chips," but smoker fuel is largely a matter of convenience; and the thing that's most plentiful, and easiest to get, is generally the one to prefer. Just now a chip-yard is the handiest for me.

Mariengo, Ill.

C. C. MILLER.

THE THICK TOPS OF HOFFMAN FRAMES IN CUBA; A REPLY TO DR. MILLER.

In Straws, June 1, Dr. Miller disagrees with me on one point about the Hoffman frame. That is, he states that they do not place too much wood between the brood and the sections, and gives as proof in his disagreement that "Bits of dark wax are taken from the brood nest to assist in capping the section"—a valuable observation that would outweigh some of the objections to the Hoffman frame in a locality where the honey-flow comes during warm weather.

But for Cuba with our honey-flow in cool or cold weather, those broad thick top-boards of the Hoffman seem to suggest to the bees the idea of a poorly made cover, and they in many cases the past winter, which was a very severe one, proceeded to seal up solid between the thick top bars, entirely isolating themselves from the supers containing bait-sections and full sheets of foundation, while colonies of apparently the same strength in the same yard, which were on Simplicity frames, left the top-bars comparatively free of wax, and proceeded to enter sections.

In the spring, however, after the weather became warm I occasionally found a section or two of drone brood in supers above Simplicity frames where starters were used, and all combs below containing drone comb were removed to hives worked for extracted, with excluding zinc between to keep queens down, and straight all-worker combs put in their places, this being done to discourage swarming. These occasional sections of clean white drone brood are of no apparent disadvantage, for the bees fill and cap the sections of honey quicker in such supers above Simplicity frames. The drone comb is cut from such sections, and starters are again put in, which is done as soon as the super is filled and removed; for leaving supers of honey on the hives in spring is not advisable, as it encourages swarming, and the honey becomes travel-stained. A super of foundation is preferable if placed on top of the super which was put on a few days previous to removing the full one.

For moving bees, the Hoffman frame, of course, has its advantages; but they are greatly outweighed by their clumsiness and inconveniences for uncapping, difficulty in removing first frame, excess of wood for cool weather, and that little wedge is too small and thin to hold in foundation which is not wired.

In editorials, June *Review*, Editor Hutchinson, page 202, in referring to a former question asked by him, and giving a solution which I offered him, restates the matter so that it implies or leads one to believe that he means that it might be possible that a clipped queen, tested, and sent out by him to customers, *remated in the hive* after being introduced, producing hybrids. That is an extraordinary question, and I solicit an answer from the editor, from Dr. Miller, Mr. Doolittle, or some of our other past-grand masters. As for myself, I think it

The queen returns to the hive later, carrying with her the copulatory organ of the drone, and after a little this is ejected. The essential part is, however, that her spermatheca, or seminal receptacle, be filled with spermatozoa during the marriage flight. The number of these has been estimated at from two to twenty million, and it is at least certain that she receives enough so that she can keep on laying worker eggs for four or five years. The spermatozoa are the essential things in this fertilization, and not the fluid in which they float, and these do not divide or increase in number in any way after they enter the queen.

—ED.]

PREPARING COMB HONEY FOR MARKET.

I herewith enclose a view taken recently, of samples of my honey and how I put it up in neat blue wrappers with my name and address on each package for regular local customers. The unwrapped sections are not of my best grade, but No. 2. I sell my best grade at 20 cts. per section at the beginning of the season, and my No. 2 goes



SECTIONS WRAPPED AND UNWRAPPED.

was only some case of reverting to type or conformity to type of ancestors.

F. N. SOMERFORD.
San Antonio de los Banos, Cuba.

[Regarding queens mating the second time *after* they have begun laying, I have already expressed my doubts in these columns. I do not yet remember seeing a case where it was absolutely shown that a queen once producing pure Italians was afterward the mother of hybrid or black bees. There is such a large chance for the old queen to die and to be replaced by a daughter that looks exactly like her that one is liable to draw a wrong conclusion. It has been shown pretty conclusively that one fertilization is sufficient to last a queen a lifetime. As bearing on this point, Dr. E. F. Phillips, of the University of Pennsylvania, in GLEANINGS for March 15, of this year, said:

at the same price later on when ten-cent country box-hive honey has played out. I sell at 20 cts. all I produce, while others sell at 10 cts. and less.

The past spring proved one of the poorest I have ever seen, as there was no rain during March and April, and it was unusually cool. My bees are moving along very well at present, and are working on linden, buckwheat, and sweet clover. I send you a cut of an experimental patch. I also have another patch of considerable extent. In some places the plants have attained a height of eight feet. These were small plants taken up in Warren Co. last July, and set out here during the hottest weather we had. I also planted a peck of seed procured from your house. I have had no trouble at all in getting a fine stand, and now it is a solid mass of bloom which are covered with bees.

I will say for the benefit of Dr. Miller,

that, two years ago, I planted half an acre in alfalfa, which grew rank and produced considerable honey. I made this statement in GLEANINGS a year or two ago. I had no trouble at all in getting it to grow, and the bees gathered considerable honey from it. The only trouble I had was in getting rid of it. In fact, there is some of it here still, and likely to remain.

WALTER L. WOMBLE.

Raleigh, N. C., June 20.

[Friend Womble is an enthusiastic amateur; and when I say "amateur" I mean one who has come to be an expert from mere love of the art. We have many such among the professional men and suburbanites, and it is these people who, because of their "pull" with the press, are going to help us put down the sensational canards about comb honey.

But our correspondent is silent regarding the lady who helps to adorn the picture. I assume that she is the "better half," and, if so, friend Womble's "right-hand man." No wonder the honey is nice.—ED.]

CUBAN BEE-KEEPER GETS INTO TROUBLE WITH THE AUTHORITIES.

Mr. George Plant, private secretary to the British Minister, and who is an amateur apiculturist, has lately had a sad experience with bees which ought to be a warning to any intending bee-men who expect to come to Cuba and go into bee-raising.

Mr. Plant has had his bees in the little town of Guanabacoa, a suburb of Havana, and which is reached by the ferry across the bay. There is a municipal law which is in force in nearly all the small towns of Cuba, where bees are classified as "fierce animals," and that no bee-man can locate a ranch nearer than about one fourth to one-half a mile from a town. There was a candy and sweet factory in Guanabacoa, and the man brought a chunk of candy to the mayor, in which were embalmed a goodly number of poor bees, with the request that the mayor enforce the law. So our bee-man was duly notified of the law, and told to move within thirty days, under penalty of a fine of \$5.00. Being unable to find a location, and wanting to have his ranch near by so that he could attend to the bees himself after business hours, he neglected to move within the specified time, and the fine was accordingly assessed. Then the ranch was moved, when Mr. Plant, hearing of a possible purchaser in town, moved them back to the old location to show the ranch off to better advantage. The purchaser did not turn up, and the usual fine was then assessed; and now as this gentleman can not get rid of the bees, and is not able to get his old location back, as the owner now has use of the land, the poor bees will meet an untimely death by suffocation.

I would just sound a note of warning to any intending bee-keepers who may want

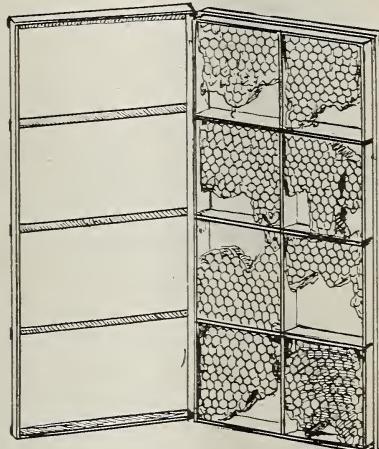
to settle here. Don't get too near the towns or villages through the country, without making all inquiries necessary beforehand, or you may be compelled to move just at the beginning of the honey-flow or an equally inconvenient time. This apiarist now has a number of supplies to sell cheap, and is going to give up bee-keeping as a pastime.

L. MACLEAN DE BEERS.

Havana, Cuba, June 22.

SAFFORD'S EXTRACTING-FRAME FOR UNFINISHED SECTIONS.

I herewith send a sketch of a very handy frame for holding partly filled sections while extracting. The frames (one for each side of the extractor) should be made of $\frac{3}{8} \times 1$ -inch stuff, and should be made $\frac{1}{4}$ inch larger inside than the exact size that the sections would require, in order that the sections may slip in and out freely. For $4\frac{1}{4} \times 4\frac{1}{4}$ sections, make it $8\frac{3}{4} \times 17\frac{1}{2}$ inside.



As the illustration shows, the frame is made in two sections, and hinged together so it will open and close like a book. The strips shown are of heavy tin $\frac{3}{4}$ inch wide, nailed on the outside of the frame at proper distances to hold the sections inside.

To operate the frame, open it and set it up in front of the uncapping-box; uncap the sections and place them in the frame. When full, close the frame and handle it the same as an ordinary brood-frame. This is the handiest arrangement I have seen for this work.

Salem, N. Y.

E. Y. SAFFORD.

[Your extracting-frame for unfinished sections will work satisfactorily; but a simple frame of the width of the section used, and just large enough to take in four, will be just as good, or better, and much cheaper. There is no advantage in having the frame made in two parts hinged together, other than that the sections will be held in place better. But a simple frame,

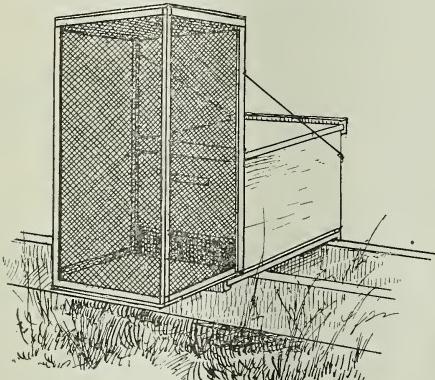
JULY 15

if handled carefully, will prove to be just as good in every way, and easier to get the sections in and out of.

I see our artist has made your frame hold six sections instead of four. The former would not go in an ordinary standard extractor.—ED.

DON'T LOSE YOUR SWARMS; A SUCCESSFUL SWARM-CATCHER; ALSO A SWARMING-TRAP.

It is common in the large apiaries of California for six or even twelve swarms to come out at a time. I have known of their doing this once, and alighting in one pile. I have also been bothered with an occasional after swarm going into several different hives, resulting in the loss of one or more queens. Last season, therefore, I made a swarm-



catcher which consisted of a frame $30 \times 14 \times 10$ inches in size, with the sides covered with wire cloth. The board cover for the top was removable, while the bottom was nailed fast and chamfered on one side to allow a $\frac{3}{8}$ -inch bee-space from the hive into the swarm-catcher. A strip of wood an inch wide, along the entire length of the swarm-catcher, extended the bee-space into the inclosure. I then took two pieces of wire cloth 3 inches wide and 14 inches long, and tacked one on each side of 4 strips of wood, $\frac{3}{8} \times \frac{3}{4}$ inch, by 3 inches long, making a bee-space $\frac{3}{8} \times 14$ inches. This I put in front of the bee-space before mentioned, so that the bees, in passing into the swarm-catcher, traveled horizontally one inch, then upward 3 inches, between the two pieces of wire cloth. I fasten this device in front of the hive by means of a string from the upper part of the catcher to the head of a wire nail bent like a fish-hook, and with the point sharpened, which will catch on to the back of the hive. This nail should not be attached to the cover or super, for they sometimes come off when a large swarm goes in. I had two last year, and hived about fifty swarms with them, with only one partial failure; for one swarm was partly out when I put it on, and about half of the bees settled in a tree.

After fifteen or twenty minutes the swarm

is all in, and the bees quiet. I even fix a hive in the shade of one of my trees, take my swarm which is secure in the catcher, to the hive, remove the cone from the catcher, and shake the bees out in front of the hive in the usual manner. Or, if I am in the midst of some work that I want to finish I can set the swarm in the shade until ready to hive it. Sometimes, when I have had them both in use at the same time a third swarm would come out and alight on the outside of one catcher; but it is an easy matter to brush those on the outside in front of an empty body, and then hive the other a few rods distant.

There are a good many advantages in the catcher, the most important of which is that over the old way of letting the bees choose their own place to cluster. This is especially true where there are tall trees, or when the apiarist is a lady, or when the bees are left in charge of a younger member his family.

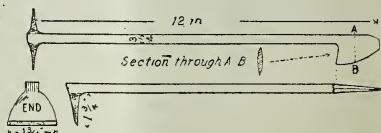
J. M. MACK.

San Diego, Cal.

[Swarm-catchers similar to this have been illustrated at various times. There is no question but that they serve a very useful purpose at times; but the chief difficulty is to get to the hive that is casting a swarm in time to catch the bees.—ED.]

PHILLIPS' HIVE-TOOL AND BEE-ESCAPE.

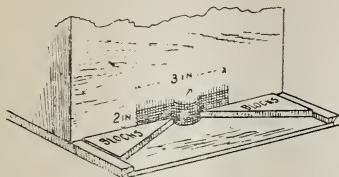
In GLEANINGS for Feb. 15 I notice a hive-tool and an escape pictured and described; and as I think my inventions in those lines are superior, I send you herewith sketches and descriptions of them. The hive-tool I find indispensable, and never go to my hive without it. I made a wooden model and took it to the smith, who forged it in steel and tempered it. I then ground and filed it up myself. End B is brought to an edge



all round, and is used to separate hive-bodies, frames, etc., and for levering frames together at the bottom. As a lifting-hook, put down between the frames, turn the hook under the top-bar, and "up she comes." The extreme end is squared for $\frac{1}{4}$ inch, and makes a good screwdriver. End A is sharpened to a chisel edge, but not so sharp as to cut the hand, and corners just rounded off. It answers as a scraper for the tops of the frames and bottom-boards, to remove brace-combs, propolis, etc. When placed between the tops of the frames and end B, and swept gently round, the tightest frames must part. It also makes a hammer. Other uses will occur to the user.

As for the escape, I think the sketch will be clear. Place the bottom-board; pile hives of supers on, with board on top; put

a piece of wire cloth against the front of the hive or super, and blocks against the wire cloth. Bees will climb up the groove, and fly away. They or others coming about can not get in or choke the entrance. Every bee will be out in a few hours.



If the entrance in the bottom-board and blocks can not be used, tack wire cloth to the front of the hive, seeing that bottom and side edges are bee proof.

WILLIAM J. PHILLIPS.

Mooata, South Australia.

[This hive-tool, doubtless, will prove very excellent; but usually I prefer something smaller that can be held in the hand all the while when one is working with bees and combs. An all purpose tool is sometimes too much of a good thing.

The bee-escape will work satisfactorily

when robbers are not bad; but you may rest assured it would not take very long for them to find their way down through it into the hive or super.—Ed.]

PEAR BLIGHT; THE RANCHMEN AND THE BEES; A CORRECTION.

On page 588, June 15, I see a statement that is very misleading to one who knows any thing of the circumstances. The fact of the case is, they did go around to see if the ranchmen would dispose of their bees, and found some 500 colonies. They did not buy any, and none have been removed from the valley, and we have but little blight to speak of. Now, if we were to try the removal of the bees from the valley it would be a big undertaking, as the cedars on the sides of the mountains are full of wild bees, and it would be hard to get all of them. I think that this season will prove to the ranchmen it is not the bees that spread the blight, and they will have to look for some other cause.

B. F. COWGILL.

Paonia, Col., June 27.

BEE POISONED BY SPRAYING; BEE STINGS IN A QUEEN'S BODY.

During the fruit-bloom the Omaha bee-keepers suffered severe losses on account of



This stack of alfalfa hay is some 600 ft. long and as high as men and machinery can make it. There is one here over 900 feet long. It is on the Reservation farm near Lovelock, Nevada.

spraying. Aug. C. Davidson lost 60 colonies out of the 70 that he successfully wintered. Mr. Lorensen, of Albright, lost 30 colonies out of 35, others report from 50 to 80 per cent losses. My loss is an even 50 per cent. Eight years ago, according to Mr. Davidson's statement, the Omaha bee-keepers suffered a similar loss. Mr. Davidson informs me of a number of instances where he has found one or more bee-stings remaining in the body of "balled" queens. Mr. Davidson is the veteran bee-keeper in this locality.

I am very much pleased with the new department added to GLEANINGS, the "Western."

J. A. JACOBSEN.

Omaha, Neb.

BEES POISONED BY SPRAYING; NO OHIO LAW AGAINST SPRAYING.

Is there a law in this State against spraying fruit in bloom? I lost so many bees from this cause this spring that there were not enough left in the hives to cover the brood, and it died in the cells, and I am not getting any surplus yet, although white clover is in full bloom. Some colonies were so strong that I should have gotten some surplus from apple and locust.

I warned the man who did the spraying before he began, and he has told me since that he consulted the prosecuting attorney of this county, who told him that there is no such law in Ohio. Is he right?

Belpre, O.

C. C. MILLER.

[There is no law in Ohio against spraying trees while in bloom, and there is really nothing that you can do. We shall have to get such a law. In the meantime I would suggest that you move your bees away from the vicinity of the man who sprays his trees. If he is of ugly temperament there is really nothing you can do except to "grin and bear it," or move your bees away during the time of year while he is spraying. I would suggest that, during fruit-bloom, you put them on a wagon and move them off a couple of miles, and then, after the spraying season is all over, move them back again.—ED.]

CALIFORNIA LIZARDS GUILTY AS CHARGER.

As regards lizards killing bees, p. 553, I say yes. If one kind of lizard will do it, then all kinds will so long as they have access to the bees. I lost six young queens by them this spring. I have seen them catch six or seven bees in less than ten minutes, and it seems to me they know they are in mischief. They dodge under the hive, and run to another one, and watch me from the corner. I have seen them catching bees, in the thorax. I saw a lizard stung in its mouth, and you should have seen the fuss he made. In the morning and evening they are after the bees the most. I think the shot-gun is the best to rid them with. I have an old muzzle loader, as that suits the best for that purpose, as you can make two shots out of one—that is, make two shots out of one regular charge. I use the fine bird shot; but I have this much to say, that, outside of the bee-yard, I do not like to see lizards molested.

Peach Tree, Cal. B. SCHNUCHEL.

RIPENING HONEY AFTER IT IS EXTRACTED.

I found one of my hives was filled with honey nearly all capped, so I extracted a large lard-can full and one gallon over from that hive. Is there any special way to handle the honey, since it is not seasoned yet, or just let it stand in the can till winter?

W.M. J. ROOS.

New Hanover, Pa., June 29.

If the honey extracted is a little green, and it may not be, it may be ripened by putting into shallow pans in a dry hot place. It should be allowed to stand about a month.—ED.]

KEROSENE OIL TO CHECK ROBBING.

Bees have stood the winter well so far. The honey crop was fine with most bee-keepers in this county. I had 21 colonies last season; got 200 gallons of strained honey and 104 lbs. comb honey. Common kerosene oil will check the worst case of robbing that I ever saw. Just rub a little around the crevices and in front of the hive. Did any of your writers ever try it?

Enloe, Tex. W. F. CHAMBLISS.





A GLIMPSE OF THE LITTLE LEAN-TO GREENHOUSE AND COLD-FRAME I HAVE BEEN TELLING YOU ABOUT. SEE P. 453, MAY 1.

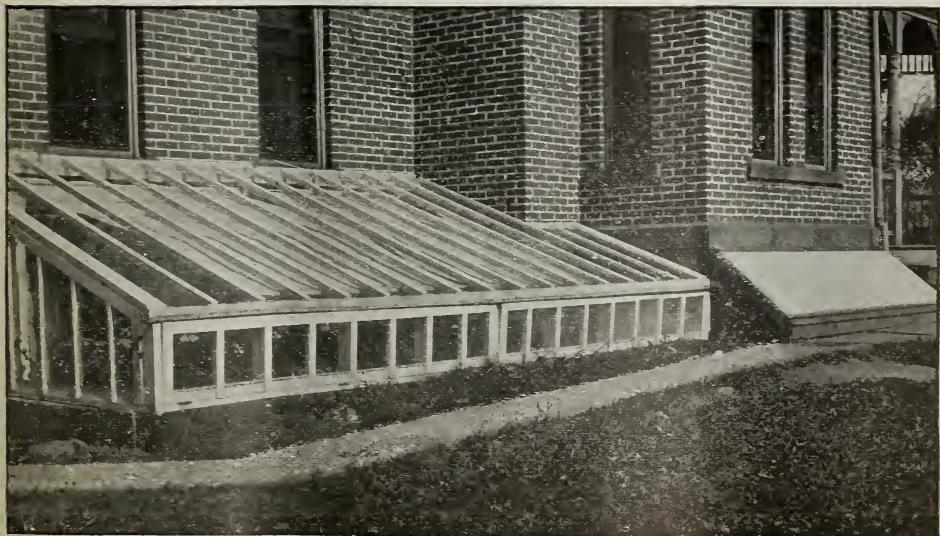
I think the pictures will make it very plain how my little greenhouse is constructed. It is made so as to cover two windows that open into the cellar or basement. The cheese-cloth used for shading during the hottest part of the day, that rolls up on curtain rollers, can be seen plainly in the picture with the greenhouse open. In the other picture these curtains are shown, drawn down so as to shade the glass. The side ventilators are not yet operated by ventilating machinery. In fact, during the summer time they with the south end sash are taken entirely off and stored away. There is a single path through the middle of the house, having beds nearly three feet wide on each side of the path. The entrance is near where I stand holding the south end sash. The hot water pipes run up one side of the path and down the other. They are the same pipes that warm our home, and seem fully adequate to keep up the temperature during the latter part of the winter. In case this shculd not be sufficient, however, I can warm it further by means of exhaust steam coming from the factory.

In one of the pictures you see a similar cloth covered structure. This is for very hardy plants in the winter, and for tender

plants later on. The cloth cover swings up, as you see, against the window above. There is one window leading from this cold-frame into the cellar. These openings into the basement are very valuable in equalizing the temperature whenever it would be otherwise too warm or too cold. Such a cloth - covered frame can be made very cheaply. At the present writing, July 1, this cloth-covered frame is a perfect bouquet of geraniums, foliage plants, and a great variety of beautiful flowers. When I returned home after an absence of about four weeks, I raised my hands in wonder and admiration, and gave a shout of surprise at the brilliant and gorgeous display it had put on during my absence. If the women-folks who read GLEANINGS could see it just now, I am afraid their husbands would have no peace until they made them something similar. This cloth covering enables us to keep many plants weeks or months later in the fall without injury than we could do without it.

GINSENG, MUSHROOMS, ETC.

Look out for ginseng and mushroom companies that tell you how you can make a great amount of money with only a little labor and only a very little land or cellar room. Especially look out for the companies that promise to buy all you can raise, at a fixed price, no matter what the price is. Do not undertake to grow ginseng, or mushrooms either, until you have visited some honest man who is making a success of the business. I am obliged to keep talking about ginseng because so many women in moderate circumstances are continually asking if I think it is true that they can



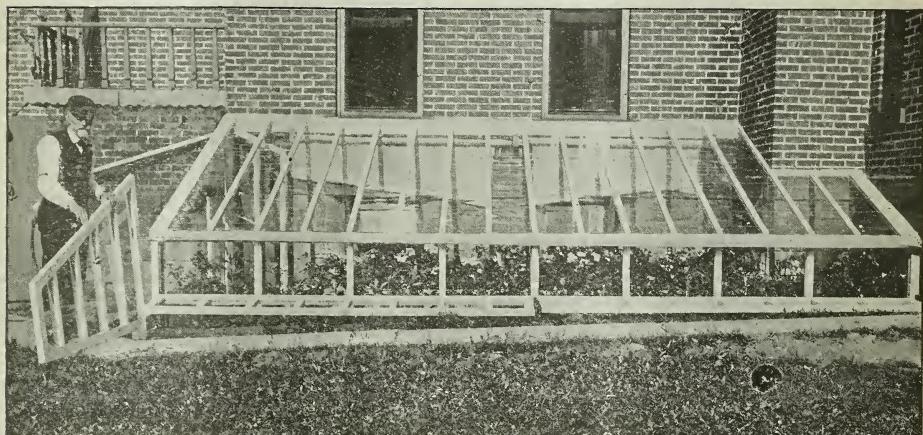
THE LITTLE LEAN-TO GREENHOUSE I HAVE BEEN TELLING YOU ABOUT; ALSO A GLIMPSE OF MY COLD-FRAME FOR FLOWERS, WITH THE CANVAS DOWN.

support themselves by growing ginseng in their little gardens. While it is possible that this may be done, I would much rather advise the growing of lettuce or other staple garden stuff that will sell in your own market; and until our doctors find that ginseng has some medical value, I do not think it a very respectable business, for men or women either, to encourage a heathen superstition. If the intelligent physicians of the United States and the rest of the world can discover by repeated tests that ginseng has a commercial value in medicine, it would

be a different thing; but so far, even the pamphlets and advertisements from those who offer seed and plants for sale have been unable to scrape up any thing worth mentioning in regard to its real value in *materia medica*.

Prof. L. A. Clinton, Director of Storrs Agricultural Experiment Station, Connecticut, says:

I have investigated carefully the ginseng industry of Central New York, having visited many gardens, and I am certain there is no profit whatever for the ordinary farmer. If one desires to purchase a few ginseng seeds, or, better yet, a few ginseng roots, to



VIEW OF THE SAME GREENHOUSE WITH VENTILATORS ALL OPEN AND SOUTH SASH REMOVED, AS WE HAVE IT IN SUMMER TIME.



MY CLOTH-COVERED COLD FRAME WITH THE COVERING RAISED.

experiment with, he will probably receive information enough to pay him for the money expended; but he should not be disappointed if he receives no returns from his investment, and he should charge up the money spent as tuition for his education.



For this cause shall a man leave his father and mother, and cleave to his wife; and they twain shall be one flesh, so then they are no more twain, but one flesh. What therefore God hath joined together, let not man put asunder.—MARK 10: 7, 8, 9.

In a recent daily I saw a notice that, during a certain length of time in Cleveland, there had been 120 marriages, but during the same period there had been 116 divorces. All the religious denominations of our land, and the entire clergy, are protesting against this growing evil of divorce. It is striking right directly at the vitals of society and good government. It is breaking up the homes. In homes where there are no children the matter may not be so bad; but where one or more children are obliged to be present, they become witnesses of discord and disagreement between father and mother. This example and object-lesson will be apt to follow them all through life. May God help me while I undertake through these Home papers to put forth a protest and to offer a remedy for the disease that threatens this God-given institution of marriage. Our text gives a remedy, and they are the words of the dear Savior. For this cause—that is, in order that a new home may be started—shall a man leave his father and mother. Heretofore the father and mother have been the most important personages in the world to this young man; but when he comes to the point of choosing some good girl for his wife, as soon as the marriage ceremony is performed he breaks away from his father and mother, and cleaves to his wife. His relation to her is a nearer one than to either father or mother; and when it comes to the point, if such a point ever does come, of choosing between father and mother and the new wife, may God give him grace and wisdom to stand by the wife and hold her up, and let the father and mother go. Yes, if need be to preserve the relation of husband and wife unhindered, let him bid good by to the father and mother; and I firmly believe there are times when it is best to go away somewhere. By all means visit the old folks occasionally, and remember your parents; but if, in your opinion, too many visits or immediate proximity to the parental home in any way interferes with the perfect union and love of yourself and wife, then go away together where you two can have peace, tranquillity, and happiness. Let me say to the parents, do not undertake to "boss" the young people

too much. If they are going to make blunders, advise as well as you can; but when they seem inclined to prefer their own way, do not interfere. Let them learn by experience, as you fathers and mothers did years ago.

Now I am going a little further. If there is a family of grown-up children, let me suggest to those children not to be over-anxious about taking care of father and mother. If they seem disposed to take care of themselves in their old fashioned ways, let them do so. At one period in my life I persuaded my parents to leave the farm, come to town, and "take things easy." Mother stood it very well. Bless the dear old soul, she was always happy, and would be happy anywhere; but not so with father. He was like a fish out of water. He became blue and discontented and unhappy, and we finally decided all around it was a mistake to persuade him to leave the farm. As the farm was not sold they went back to it, and lived alone with the calves and chickens, garden and orchard, and found peace and happiness in their old age. In a like manner, Mrs. Root and myself in that cabin in the woods have enjoyed ourselves and the untrammelled liberty it gave us—I was going to say as much as we did when we were first married; but that would not be true, for we enjoyed being alone—I feel almost tempted to say a hundred times more than when we were first married, although we were a very loving couple when we first started out together.

You may have surmised that I am coming over into the "mother-in-law" business; and while I feel like defending the mothers-in-law, and have defended them heretofore, I believe a good many of them have unwittingly made trouble between the young husband and his wife. Not long ago a mother-in-law, while in the young wife's own home, said something like this. Of course, they had been having a jangle:

"Well, what did you bring to my son, any way? You came here but little better than a pauper."

Why, my dear friends, just think how that faithful young wife must have been stung and cut to the quick by such talk! I suppose some of the women readers will say they would have "fired" the old lady out of the front door or back door in double-quick time. But this young wife was wiser. She took it meekly and patiently. The husband came in soon after; and when he could not quiet his mother by gentle means he took her by the hand and led her out of his own home and took her to her own home. He came to the point where he had to choose between the wife and mother. He did a manly thing—in fact, the only thing for a man to do, in standing by his wife (according to our text) and putting his own mother outdoors—of course, by gentle means—when she would not be civil to the wife of his choice. I knew this wife quite intimately. She has not only always

been a meek, inoffensive, and lovable young woman, but a most indefatigable worker, not only indoors, in her domestic affairs, but out in the garden and on the farm, when work was greatly crowding. I recommended at once that the young people plant their own home at least several miles away; but the son and father were working the farm together, and it seemed a very hard matter to dissolve their business relations.

Another young man has or had a sickly wife, and he was brute enough to keep throwing it up to her during her sickness that she was a "bill of expense," and even figured up how much she had earned since he had married her, and how much her doctors' bills had cost him. Poor fellow! What a poor comprehension he had of the middle verse of our text—"and they twain shall be one flesh"! Think for a moment of a husband who can say to his wife, "It has cost me so and so to hire doctors and care for you while you were sick; and you have not all together, since you and I have been married, earned a fourth of that amount." Then the fellow had the cheek after that to suggest that she go home and stay with her father till she was well, letting the father bear the expense of her sickness. If she got well enough to be of some use, she might come back and be his wife again. What a comprehension of the marriage relation! The young woman went home to her father, but I believe she has no expectations of ever going back. She may have been at fault. I do not know any thing about that; but there is usually fault on both sides. I suppose it is possible that, if she had preserved a Christian spirit, and prayed for her husband daily—perhaps prayed with him and worked hard to earn his love—he might have been pulled out of his *awful* ungenerous and unmanly selfishness. The trouble is, too many women would say such a man could never be made any better; but where even one of the two is a professing Christian, and is full of the Holy Spirit, great wonders may be done—yes, even like changing the leopard's spots as the prophet Jeremiah expresses it.

During Mrs. Root's recent sickness, one day when she was getting better I leaned over and whispered to her, "You are a dear old girl." I remember the smile that came on her face as she replied, "Yes, I am beginning to think so myself." I did not exactly catch on; but when she added something about two nurses and four doctors, I saw she was worrying about the expense it made to get her well. But, thank God, such a thought never entered my mind.

It is not always the mother-in-law. The father-in-law or other relatives may stir up discord between man and wife. The last verse of our text says, "What God hath joined together, let not man put asunder." I suppose it includes the thought, let no man put asunder. Every man, woman, or child, should be exceedingly careful about

doing or saying any thing that may destroy the harmony that exists or always should exist between husband and wife. I remember at one time in my life I was asked to listen to a complaint against Mrs. Root. I replied something like this:

"My friend, you may abuse *me* all you like—call me any thing you wish; but you will have to excuse me from listening to any complaint concerning Mrs. Root in her absence. My shoulders are broad. I can bear unkind words, and perhaps I could bear a club if it were not a very big one, and if it were not laid on too heavily, but when you strike the dear wife, I can not stand it, and you will have to excuse me."

First of all, and above all, *the Lord Jesus Christ*, who uttered the words of our text, should rule over the home. His presence should be recognized and honored, not only before every meal but before going to bed. Both husband and wife should pray for the presence of the Holy Spirit to crowd out continually all wrong and unkind feelings toward each other. You two may scold and find fault about the great cold unfeeling world if you choose; but never with each other. If you can not go as far as that, try very hard to avoid showing the least trace of unkindness, impatience, or indication of annoyance with each other *before the world*, and, above all, before the children. If there are differences to be settled, go away by yourselves where nobody can interrupt or overhear, then settle them, if necessary, on bended knee, with her hand clasped in yours. After this go before the children or the outer world, and let them see that you two are one in body, spirit, and in soul.

I have watched the growing spirit of discord among relatives and friends. It comes on by slow degrees. Divorces are not made up in a few days. The married pair seldom come to the point of separation until Satan has had them in control for weeks, months, or perhaps years. The perfect harmony and love that God intended should exist between man and wife are easily marred and put out of tune. It is like a delicate instrument that will hardly bear the disturbance of a gentle breeze. Let me illustrate; and if I mention something I have mentioned before, it will not matter. Something I wanted very much and could not find when I was in great hurry was out of place. Mrs. Root declared she had not seen it nor touched it. Nobody else was around our home at the time. I finally found it in a very unexpected and out-of-the-way place. I told her she must have placed it there. She replied quickly that I certainly was the one who placed it there, and had forgotten it. Then I retorted that the circumstances were such that it was *absolutely impossible* I could have placed it where I found it. I remember that, at the time, it seemed to me exceedingly plain to any one who would reflect a moment, that I could not have put it in that out-of-the-way place. She replied, somewhat stirred up,

"And pray tell me why I have not as good a right to say 'the circumstances are such' that it is impossible I placed it there."

Now, that little bell of conscience I have told you about began ringing sharp and clear—"Lord, help!" and when that bell rings, I always stop. These words, "Lord, help!" came into my life soon after I became a Christian; and although this little alarm-bell is not often used of late years, it is there yet, and it *never fails*. May God be praised for it. Had it not been for the little prayer, "Lord, help!" I should have added, "Such reasoning is all you can expect of a woman, anyhow." I did not say it then, mind you, and I am exceedingly glad I did not. I have never told Mrs. Root I thought of saying it. May be when she sees it in print she will be "mad" yet, but I think not.

Well, this little jangle disturbed my peace of mind, and marred that delicate machinery, and threw it out of tune for several days—I mean the machinery I have been talking about that keeps up that holy bond of sympathy between man and wife. It was not until we two were alone up in the cabin in the woods that I made the wonderful discovery (at least wonderful to me) that this love, sympathy, and affection are more precious and more satisfying than any thing else in this whole wide world.

A great many men are in the habit of looking down upon their wives as not quite their equals in intellect and judgment and perception. Oh! I know, dear friends, just as Artemas Ward said he knew it was a bad plan to tell lies. He knew by experience. Even after I had been for years a professing Christian, I was in the habit of having moods or spells when I did not want to be talked to. Mrs. Root told me not very long ago that for years, while she knew, as a general thing, I liked to have her near me, there were times when I did not want to be disturbed. For instance, suppose I was planning my Home paper and making notes, she would say something, and I would not answer, because I was busy, or perhaps (God forgive me) I would rudely ask her not to bother me. She said that, for many years, she was afraid of me at such times. Now, friends, please take this in the right sense. She was afraid I might be tired or a little bit cross, and would not want to talk; but, dear friends, that time has all gone by. There is not a moment in all my existence, either day or night, when it does not give me a thrill of pleasure to hear her voice and feel the touch of her hand or catch a glimpse of her dear figure somewhere in the dim distance. And you too, dear brother and sister, may feel this same joy, this precious gift from God, to fill your soul to the brim with happiness because of the companion he in his loving kindness has given you, even though you be between sixty and seventy years of age. This relation between you two may grow so strong that no power on earth can mar it. I am not sure that even death itself will

end it. I have searched my Bible carefully, and I know pretty well what it says about it.

Now please pardon me if I go a little further. When I was in my teens I got hold of a book by Fowler & Wells. In it there were extracts from poems. It was about the time I first met Mrs. Root, when she was in the bloom of girlhood. It read something like this :

Then come in the evening or come in the morning;
Come when you're looked for or come without warning.

Then follows a line I can not for the life of me recall; but the last line of the verse was :

But the oftener you come, the more I'll adore you.

My boyish fancy suggested at that time (I was eighteen or nineteen) that I could live with Mrs. Root all my life, and feel just that way; yes, and such might have been the case, I presume had Christ Jesus at that time been my leader. May God forgive me for straying as I did. Perhaps this love between us two might not have been so perfect had it not been for the thorns and brambles (of my own making) through which we two have traveled for a few of the forty and more years we have lived together. But, may God be praised, I can now say, as we have it in our little verse, Mrs. Root may

Come in the evening or come in the morning;
Come when she's looked for, or come without warning.

I wonder if some of our readers can supply the missing line of that old stanza. Yes, the oftener she comes, the "more I'll adore her." Of course, that word "adore" does not quite fit at our stage of life. We both *adore* the Lord Jesus Christ; but next to him comes (to me) the dear wife.

Of course, it is necessary to be self-sacrificing and to give up a good deal to preserve this relation. Mrs. Root is an exceedingly sweet tempered woman; but from the knowledge and experience I have of her makeup I know I could stir her up to fierce warfare in less than an hour. But perhaps I had better hold on a bit; for just now if I should go back to my old selfish ways suddenly, she would conclude at once that I had gone crazy; and instead of letting her temper come up, she would pity me and call in the friends and relatives.

Let me now give you an illustration of something recent in the way of self-sacrifice and giving way to the dear partner of your life.

While traveling in the cars in Central Michigan a big storm came up. The water came down like "suds," and the fields were covered with puddles of water. Every thing was swimming. Mrs. Root suggested that I unpack her stuff and get her rubbers, for when we should reach Toledo it would be sure to be sloppy. Said I:

"Why, my dear wife, we are several hours and something like 200 miles from Toledo. Thunder-storms in the latter part of June are generally more or less lo-

cal. The fact that every thing is swimming here is no evidence *at all* that it will not be dry in Toledo, and even dusty."

But she was so sure that it must be sloppy everywhere, I gave way and got her rubbers. I told her, however, that after we had gone ten miles we might find dusty roads, and then forgot about it. In half an hour we came into Lansing, where the clouds had disappeared. The sun was shining, and she smilingly called my attention to the fact that the roads were *actually dusty*. I had not studied the working of the Weather Bureau, and displayed their signals all these years, for nothing. Mrs. Root was reasoning somewhat like the almanac-makers who still insist there are men living who can tell what the weather will be *all over the United States* a year ahead.

Now, I give this illustration to show that, had I insisted on my view of things, which was right, a little unpleasantness might have arisen. Next morning, in Toledo, before leaving our sleeping-room she wanted to slick things up and put them to rights; but I said that we would miss the eight-o'clock car if she waited to do that. But she replied it would take only a minute to make things look tidy in the pretty little room they had given us. I replied, "Why, my dear wife, who ever thinks ofslicking up a sleeping-room in a *hotel?* They have women employed for that very purpose, and the bill we pay covers the cost of setting things to rights. We shall miss our car, and then have to wait another hour."

I think she said that, if nobody else appreciated it, the chambermaid would when she came to make up the bed, etc. But I let her have her own way about leaving things neat and tidy wherever she went, even in a hotel in a great city.

When we arrived at the suburban depot the car had just gone, so we had to wait an hour. This second car did not make connection at Norwalk, so we had to take another wait of *an hour and a half*, just because she would have her own way in slicking things up a little in our sleeping-room. I am not finding fault here with her in print, more than I did to her face, because, in finding this great happiness I have told you about, I have discovered that one of the first conditions is not to find fault with and criticise your companion's conduct. After we had been forced to wait twice for our car in consequence of that delay I did not once remind her of it, and did not say, "I told you so." But I gained something worth a *thousand times more.**

* Some may urge that it takes too much time to go through life doing work that other people are hired to do. But, after all, what are we living for? "What shall it profit a man?" etc. Possibly there are readers of GLEANINGS whose work is to look after sleeping-rooms when guests have departed. Suppose all of us, men and women, should follow Mrs. Root's example, and endeavor to make the work easy and pleasant, even for the hired girl whose task it is to make beds, and sweep up and restore to order where every thing has been left in disorder. Let's see. Who was it that

Now, do not rush to the conclusion that Mrs. Root is "bossing" me. When she found out there at the cabin in the woods that I was devoting my life to her happiness and comfort, she set about seeing what she could do in the way of self-sacrifice and giving way to me. It has seemed as if God in his great providence led us two off alone into the woods to discover and unfold the great unexplored region of happiness that he has in store for every married couple after they have brought up a family of children. Dear reader, contrast such a life with one of jangling, discord, and fault-finding. Contrast it with the conditions outlined in the following:

A gray-headed old farmer had the good fortune to get for a second wife a middle-aged schoolteacher, a Christian woman of culture and amiable disposition. This man came to our store to get some tools he needed for farming. His wife came along, and was very much pleased with some of the kitchen utensils on our five and ten cent counter. This was years ago. Some of them were sadly needed in that ill-furnished kitchen in that farm home. She pleasantly asked for a little change to get these useful household appliances. Shall I tell you what his reply was to her request for a little money? "No, I haven't a cent for any such — traps. Come on home."

She had given her comparatively sweet pure life into his care and keeping; and the above foul language (for there were foul oaths where I have put the blanks) was her reward for her self-sacrifice; and that was his return to the great God above who permitted him to have this comparatively beautiful young wife for his helpmeet. I presume she was tired of teaching, and wanted a *home*, a place to rest, and his proposal was the only place that seemed to offer her a *home of her own*.

Another point: Most married couples, if they have been prudent and frugal, have laid up some property by the time the children are married and gone away. They have the means to take life easy, but discover to their sadness that *money* does not make them happy. If they are not very careful it will be just the contrary. When their lives are not so busy they have time to find fault, and "Satan finds some mischief still for idle hands," you know. A man of considerable means was recently riding by my side. We passed a little unpretentious country home. The house was not even painted. There were no shade-trees, and almost no garden. He stopped his horse and pointed at the house.

"Mr. Root, the happiest days of my life were passed in that little house. When we

said, "And whosoever will be chief among you, let him be your servant"?

To be exact, it is not certain that this slicking-up was what caused us to lose the car. We were delayed at the breakfast-table and by other causes. The point I wish to make is that, if I had been disposed to scold, grumble, and find fault, I might have kept throwing it up to her, just as I used to do sometimes, before I was redeemed out of the darkness and brought into the light.

were first married we lived there for quite a spell until a better place was ready. We both worked hard, and planned together; and it is the honest truth, I have never seen more happiness, contentment, and real enjoyment at any time before or since than in that little humble home."

Dear friends, there are evidences all round about us that show we do not need money to make us happy. A little story that I saw in a Sunday-school paper may help us right here:

Two farmers, whose lots joined each other, had quarreled for years over the location of a line fence. There had been lawsuit after lawsuit until one of the two died. I do not know but one of the lawyers employed took his client's farm for pay — at least that lawyer came into possession of the farm in some way or other. Now, this lawyer had learned something by experience. He came over to see his farmer neighbor to talk about the line fence. The neighbors who lived around there, and who were looking on, were laughing in their sleeves. Would this old gray-headed man who had lawed so much about that line fence undertake to fight an expert lawyer? But he seemed to be like the game cocks we read about — no matter what the odds, he was ready to fight, and he informed his lawyer neighbor that he would fight for his rights to the bitter end.

The lawyer finally inquired, "Well, neighbor B., what *are* your rights? Where do you think the fence ought to be?"

"Why, sir, it ought to be over on your side two feet further at the south end and three feet further at the north."

"Well, now, my friend, I believe in having peace and good will between neighbors. You may not only have the fence over where you choose, but you may move it two feet further yet at each end. I shall have all the land I need as long as I live, and it is worth something to have things satisfactory with those who live next to me."

Poor old farmer B.! He was braced up for a fight, but he was not prepared for any such spirit as this. It took the wind all out of his sails. He could not believe that this man, and he a lawyer, should undertake to settle disputes in that way. It was not very long before he "flopped," as they say in politics; and he told the new neighbor he didn't propose to be outdone in generosity, and even suggested that they leave the fence where it then stood. Thus ended a lawsuit of years' standing. Now, it seems almost preposterous to recommend that we old people recognize practicing similar tactics with our good wives. Let me see. What was it that Jesus said in regard to this very matter? "Do good and lend, hoping for nothing again." And then further on:

Give, and it shall be given unto you; good measure, pressed down and shaken together and running over, shall men give into your bosom. For with the same measure that ye mete withal, it shall be measured to you again.

Why, bless your hearts, dear friends, no

woman will be outdone in self-sacrifice and unselfishness. Try it and see. But make the Bible your daily counselor and guide. You will never succeed unless you do.

This thing opens up still further. If such an attitude will move the wife, why not the son and daughter? But the dear wife should come first so she can give us motherly help; and, by the way, my honest opinion is that the mother's affection, or you may say intuition, is safer to follow, by tremendous odds, than that of the father, generally speaking, and thus another home will be made perfect through God's love.

Now, dear friends, in all that I have written I have had in mind that sometimes, but not often, it is the husband who is the suffering one, and the wife who is the domineering element. There is a slang expression for such a state of affairs that I do not wish to repeat here. There is always more or less fault on both sides; but as the husband is the stronger, and the one in the habit of taking the lead, I have appealed to him.

And this suggests just a word more to husbands. I came pretty near saying, when provoked, "That is a fair sample of a woman's reasoning."* A woman does not reason exactly as a man does. Her life is in a different line — that is, most women's lives are. We have reason to know, however, in this day and age, that there *are* women who are equal to men in almost every line you can suggest, not only in art and science, but in the trades and industries, on the farm, in the field, or in the workshop. God has given us a diversity of talents. Some men have an aptness and a love for cooking, and perhaps for housework — cleaning house, etc., and there are women, scores of them, who are skilled in the work usually accorded to man. I presume the largest happiness to the human race consists in letting both men and women have the greatest freedom in choosing their work. In fact, everybody does his work better by having greater freedom. Now, my friend, if this wife of yours had greater freedom than she ever had before, no doubt she would be a happier woman, and be of more benefit to the world and of

* I once heard a husband say to his wife, who had asked what he considered a foolish question, something like this: "Nobody of good common sense would have asked such a question as that." No doubt women sometimes ask foolish questions—at least they seem so to the man who has not informed his wife or kept her posted in regard to what is going on in the world, especially in the line of men's business. The following clipping from the Cleveland *Leader* graphically describes a good many husbands:

The wisest man on this here earth	Is paw;
He knows a thousand times as much	As raw.
The neighbors don't know near as much	As he.
He's full of knowledge as he	Can be.
He knows just how the housework should	Be done,
And how this glorious country should	Be run.
He knows exactly how maw ought	To dress—
He's certain he could do it for	Much less.

more benefit to you. In this recent discovery of mine which I have been trying to tell you about, I have seen Mrs. Root develop wonderful talent in lines she had never thought of before. It has been my delight to tell her to do just what she pleased, and I would help her; and, oh what fun it has been to see *her* plans succeed when we two were working together! When we started in life our parents were all poor; but I was permitted to attend school, and very good schools too, for a much longer period than she was. Another thing, I learned very easily, while she, when young, was comparatively slow in getting hold of some things. For many years of our married life I took the lead, a good deal because of my supposed superior education; but after she had followed our five children, not only through their schooling here in Medina, but after they went away to college, I began to be slightly surprised to find she was, in many things, getting ahead of me. She has all her life been a great reader; but she is more careful than the rest of us in choosing her books and magazines. She has been completing and rounding out her education by means of the excellent periodicals that this age affords. God knows I am not mentioning these things to boast of the wife he has given me, but that others may take courage and grasp hold of the opportunities that still lie before them even though they may be sixty or seventy years old.

With a fervent prayer that this Home paper may be the means of discouraging, at least to some extent, this growing evil of divorce, especially after several children have been brought up, I remain your old friend

A. I. ROOT.

LOOK AFTER THE YOUNG GIRLS AS WELL AS THE YOUNG BOYS.

Hand in hand with the liquor-traffic there is another traffic that I hardly dare mention on these pages. Of late it has been developing in a new line. Girls are advertised for to learn telegraphy or typewriting, etc., and many respond who have no education to fill either position. The advertisers do not care any thing about this. The girl is given an easy place and good pay; and unless she has a brother or father or somebody else to look after her, she is led, if it is a possible thing, in the path that leads to ruin. A certain set of fiends in human form at the St. Louis exposition have agents out all over our land. No girl is safe from these snares after she is away from home and friends. Look after the girls, especially when they contemplate leaving the parental home. The Young Women's Christian Temperance Union has a society in the Union Station, St. Louis, to look after girls who come unattended; but I am informed that the crowds are now so great that this organization can not look after the passengers who come in, from one

train out of ten. Will the fathers and mothers and all Christian people help in rescuing our girls from the grasp of this Satanic crowd?

THE RIGHTS OF OTHERS.

The following, from the *Modern Farmer and Busy Bee* for June, is so ably presented that we copy it entire. To tell the truth, I do not know of another man living who can present great truths in this line with more directness and pungency than our good friend Emerson T. Abbott.

Did you ever stop to think how few people there are who have an unselfish regard for the rights of others? We talk a great deal about human rights and human liberty, and yet, after all, most people, especially the male portion of humanity, think more of their own selfish enjoyments than they do of the rights of others. To illustrate, every person surely has a right to pure air to breathe, and yet nine-tenths of the men have no hesitation in robbing you of that privilege. They will light a cigar or a pipe, or, worse still, a cigarette, and go along the street poisoning the air with tobacco smoke with perfect indifference, come into your home or office and puff it into your face in the same way, and the moment you object they begin to talk about "personal liberty," etc. They will do this sometimes even in the presence of ladies, without so much as even saying, "I beg your pardon." It is true all of them will not do it, but many of them are so wedded to this habit of self-indulgence that even the presence of ladies has no influence on them. "But," says one, "tobacco smoke is not poisonous, and I do not see any thing about it to make it disagreeable to any one." Just so; there is where the selfishness comes in. You like it; and if the other fellow does not, that is his business. This is selfishness in the extreme! It is poisonous to me, and it was to you until your system became saturated with it, and rendered you unconscious of its poisonous influences. If it were not, what right have you to make my life burden to me in order to add to your own selfish personal enjoyment, even though we should admit for the moment that there is no probability of any injury to you? You may like to breathe air filled with second-hand tobacco smoke, but there are people who want theirs free from all poisonous influences. They must breathe air of some kind, and why should you insist on robbing them of their God-given right to breathe pure air? About the only place a man has a right to do a thing of this kind is on his own premises, where no one else is likely to come, and even in his own home he should not forget the rights of the other members of the family. Please note that this is not a dissertation on morals but a very meager elucidation of a principle which is very broad and far-reaching in its application, and one worthy the careful attention of every man or woman. Of course, we come in contact with such things more in the city than in the country, but we are inclined to think that the country has its share of this kind of selfishness.

DUFFY'S MALT WHISKY THAT HELPED A MAN TO BE 103 YEARS OLD; SEE PAGE 610, JUNE 15.

Friend Root:—After reading your sermon of June 15, thought this might interest you. T. B. TERRY.
Hudson, O., June 22.

With the above, friend Terry sends two leaves taken from a periodical called *Physical Culture*. From these leaves I make the following abbreviated extracts:

Here is a sample of the usual methods of patent-medicine venders and others who are desirous of separating the public from their hard-earned dollars. Health and strength only \$1.00 a bottle! It is to be hoped that the time is not far distant when the public will realize that health does not come in bottles, powders, or pills.—BERNARD MCFADDEN.

In the daily papers throughout the country there have frequently appeared testimonials of the wonderful effect that has followed the use of "Duffy Malt Whisky." Centenarians and others of advanced age have apparently contributed commendatory testimonials, glowing with praise of this dope, which the company is selling at \$1.00 a bottle.

The perusal of any of these testimonials would naturally cause almost any intelligent reader to believe that there is some merit in this alcohol poison. When centenarians can daily use a fiery liquor of this character, and be apparently improved in health, why, people naturally infer that almost any individual would be more vigorous if this whisky were used regularly.

On many occasions, after reading the laudatory testimonials sent forth by this whisky company in their advertisements in the daily newspapers, I have wondered how they happened to secure the commendation of these old people. I did not for a moment believe that they were genuine. I felt satisfied that there was some influence used. I do not believe that any individual was ever made stronger or healthier by the use of whisky.

I have taken the pains to investigate one of these lying testimonials which has been sent broadcast through the daily press by the Duffy Malt Whisky Company. Mr. Wolf Weisman, of Hoboken, N. J., now 103 years of age, is credited with having written and sent his testimonial. Mr. Weisman does not speak the English language, and you can well understand his amazement when the testimonial used by the Duffy Malt Whisky Company had been interpreted to him. He had never written it, had never seen it, had never even heard of it. He denied in the most emphatic terms that he had been drinking Duffy's malt whisky for several years, and stated that he had never heard of that brand of whisky until about the first of October. About that time, he states, a case of Duffy's malt whisky was delivered to him without explanation of any kind, and without charges. He did not know where it came from, and knew no reason why it should have been sent to him. Neither at that time, nor any time since, has any one asked him his opinion in reference to its merits, nor has he expressed any opinion in relation to it.

This is a sample of the fake methods that are used by many so-called honorable concerns in the business world to-day. They indicate a condition that is indeed to be deplored; and when the names and reputation of well-known men can be taken and used for a whisky advertisement, and can be bandied here and there at the will of these greedy whisky-manufacturers, it is time that some laws were made that will bring to justice the responsible offenders.

I extract the following from the advertisement of Duffy's malt whisky, this advertisement being copied in *Physical Culture*.

Wolf Weisman, of Hoboken, N. J., now in his 104th year, and possessed of all his faculties, says, "Duffy's pure malt whisky keeps my mind clear, and body strong and well. It has prolonged my life many years." Mr. Weisman is just as keen and bright as he was 25 years ago.

I have used Duffy's Pure Malt Whisky for years. It tones up the system, enriches the blood, stimulates the circulation, takes away that tired feeling, and keeps my mind clear and body strong and well. It has undoubtedly prolonged my life many years. I am very thankful for having heard of Duffy's Pure Malt Whisky, and would not be without it.

WOLF WEISMAN, No. 110 Adams St.

In our issue for June 15 I said Duffy's advertisement was still in every issue of the *Cleveland Leader*; but I am glad to say I do not find it now in that journal. Very likely they have been advised of the way the Duffy people do business. I am not a lawyer; but if it is true that there are no laws in our land to punish this sort of work, some such law should be made; and this practice of wholesale lying and swindling in connection with whisky advertising should be brought to an end. It is a disgrace to our nation and to the present age. In this connection permit me to say that, in my article of June 15, I reflected on the ad-

vertising pages of the *Chicago Advance*. I have examined carefully every issue during the past month, and the objectionable advertisements have all or very nearly all disappeared, so we can rejoice again.



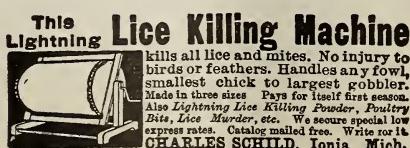
NATURE PERFORMS THE CURE, AND THE DRUGS AND MEDICINES OFTEN GET THE CREDIT FOR IT.

I believe all the drugs in the market and the patented medicines are humbugs. I can prove it in a measure. I have tried nearly all that claim they will cure eczema. I have spent over \$300 to get eczema out of my limbs, and all failed. I believe all the smart men know that these diseases and others will, as a rule, wear off in time, so they give colored water perfumed with licorice, etc., to blind the patients, and make their living at the expense of the foolish people who are ready to throw away their money.

Shanesville, O.

H. J. BLICKENDERFER.

Friend B., I am afraid your opening sentence is a little too severe; but I do believe a great portion of these things get the credit when nature does the work, and the medicine has nothing whatever to do with it. Your point comes in excellently concerning remedies for stings. I think most of you will agree with me that the pain from the sting usually ceases quite suddenly, sooner or later, after receiving the sting. This being true, when somebody runs for his remedy, and gets it on the spot just about as the pain is letting up, he rushes to the conclusion that the treatment causes it to cease, when it has no effect whatever. I have given these things a most careful test almost ever since I was interested in bees, and I have never yet had any reason to change my instruction in regard to bee-stings. Get every bit of the sting out of the wound as soon as possible, then go about your work, and try not to think of the sting. If you sit down and nurse it and fuss with it, the pain will last longer than if you let it alone and "get busy" so as to keep your mind away from the matter entirely and on something else. And I think the same rule will apply in a like manner for a great many aches and pains. If you get a sliver in your finger, of course you must dig it out first; then apply your "Christian science," or whatever you may choose to call it.



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Last winter was a severe test on Bees,

But Quirin's Famous Leather-colored Italians

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Select	\$ 75	\$ 4 00	\$ 7 00
Tested	1 00	5 00	9 00
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Breeders	3 00	15 00	
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Special low prices on Queens and Nuclei in 50 and 100 Lots. Nuclei on L. or Danzenbaker frames.

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Is recognized as such, to the extent that last season I was compelled to withdraw my ad. to keep from being swamped with orders. THIS SEASON I SHALL RUN MY

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